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=> file hcaplus; d que l12; d que l13; d que l14; d que l19; d que l24; d que l31
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FILE COVERS 1907 - 12 Jul 2005  VOL 143 ISS 3
FILE LAST UPDATED: 11 Jul 2005  (20050711/ED)

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L2          8904 SEA FILE=HCAPLUS ABB=ON  PLU=ON  GLYCOLIPIDS+PFT/CT
L3         16736 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SEPARATION+PFT/CT
L4         11100 SEA FILE=HCAPLUS ABB=ON  PLU=ON  OSMOTIC PRESSURE+NT/CT
L5          5968 SEA FILE=HCAPLUS ABB=ON  PLU=ON  OSMOSIS+PFT/CT
L6          7853 SEA FILE=HCAPLUS ABB=ON  PLU=ON  PLANT CELL/CT
L7         17799 SEA FILE=HCAPLUS ABB=ON  PLU=ON  PLANT TISSUE/CT
L8         40698 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ANIMAL CELL/CT
L9         35966 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ANIMAL TISSUE/CT
L10          917 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SOLVENTS/CT (L) NONPOLAR
L11         1300 SEA FILE=HCAPLUS ABB=ON  PLU=ON  POLAR SOLVENTS+NT/CT
L12            1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L2 AND L3 AND (L4 OR L5) AND
                  (L6 OR L7 OR L8 OR L9) AND (L10 OR L11)



L2          8904 SEA FILE=HCAPLUS ABB=ON  PLU=ON  GLYCOLIPIDS+PFT/CT
L3         16736 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SEPARATION+PFT/CT
L6          7853 SEA FILE=HCAPLUS ABB=ON  PLU=ON  PLANT CELL/CT
L7         17799 SEA FILE=HCAPLUS ABB=ON  PLU=ON  PLANT TISSUE/CT
L8         40698 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ANIMAL CELL/CT
L9         35966 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ANIMAL TISSUE/CT
L13            2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L2 AND L3 AND (L6 OR L7 OR L8
                  OR L9)



L2          8904 SEA FILE=HCAPLUS ABB=ON  PLU=ON  GLYCOLIPIDS+PFT/CT
L3         16736 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SEPARATION+PFT/CT
L10          917 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SOLVENTS/CT (L) NONPOLAR
L11         1300 SEA FILE=HCAPLUS ABB=ON  PLU=ON  POLAR SOLVENTS+NT/CT
L14            1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L2 AND L3 AND (L10 OR L11)
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L15       397013 SEA FILE=HCAPLUS ABB=ON  PLU=ON  GLYCOLIPIDS OR GANGLIOSIDE?
                 OR GLYCOSPHINGOLIPID? OR PHOSPHOLIPID? OR LIPID
L16      1342220 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SEPARAT?
L17         6423 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L15 (5A) L16
L18            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 AND (L10 OR L11)
L19            4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L18 NOT SPIRULINA/TI


L4         11100 SEA FILE=HCAPLUS ABB=ON  PLU=ON  OSMOTIC PRESSURE+NT/CT
L5          5968 SEA FILE=HCAPLUS ABB=ON  PLU=ON  OSMOSIS+PFT/CT
L15       397013 SEA FILE=HCAPLUS ABB=ON  PLU=ON  GLYCOLIPIDS OR GANGLIOSIDE?
                 OR GLYCOSPHINGOLIPID? OR PHOSPHOLIPID? OR LIPID
L16      1342220 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SEPARAT?
L17         6423 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L15 (5A) L16
L24            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 AND (L4 OR L5)


L4         11100 SEA FILE=HCAPLUS ABB=ON  PLU=ON  OSMOTIC PRESSURE+NT/CT
L5          5968 SEA FILE=HCAPLUS ABB=ON  PLU=ON  OSMOSIS+PFT/CT
L10          917 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SOLVENTS/CT (L) NONPOLAR
L11         1300 SEA FILE=HCAPLUS ABB=ON  PLU=ON  POLAR SOLVENTS+NT/CT
L15       397013 SEA FILE=HCAPLUS ABB=ON  PLU=ON  GLYCOLIPIDS OR GANGLIOSIDE?
                 OR GLYCOSPHINGOLIPID? OR PHOSPHOLIPID? OR LIPID
L16      1342220 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SEPARAT?
L17         6423 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L15 (5A) L16
L18            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 AND (L10 OR L11)
L19            4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L18 NOT SPIRULINA/TI
L24            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 AND (L4 OR L5)
L25        53069 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SOLVENTS/CW
L26           31 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 AND L25
L29           27 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26 NOT (L19 OR L24)
L30           12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L29 AND (EXTRACTION OR
                 SOLVENT OR ISOLAT? OR PREDICTED)/TI
L31           11 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 NOT GASES/TI


=> s l12 or l13 or l14 or l19 or l24 or l31
L74           20 L12 OR L13 OR L14 OR L19 OR L24 OR L31

=> file biosis; d que l42; d que l44
FILE 'BIOSIS' ENTERED AT 15:45:55 ON 12 JUL 2005
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 8 July 2005 (20050708/ED)

FILE RELOADED: 19 October 2003.


L32       101597 SEA FILE=BIOSIS ABB=ON  PLU=ON  GLYCOLIPIDS OR LIPIDS OR
                 GANGLIOSIDES OR GLYCOSPHINGOLIPIDS
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L33      377403 SEA FILE=BIOSIS ABB=ON  PLU=ON  SEPARAT?
L34       42957 SEA FILE=BIOSIS ABB=ON  PLU=ON  OSMOS? OR OSMOT?
L37     1334773 SEA FILE=BIOSIS ABB=ON  PLU=ON  EXTRACT? OR ISOLAT? OR PURIF?
L39     1126893 SEA FILE=BIOSIS ABB=ON  PLU=ON  MEMBRAN?
L41          24 SEA FILE=BIOSIS ABB=ON  PLU=ON  L32 (5A) (L33 OR L37) AND L34
                AND L39
L42           1 SEA FILE=BIOSIS ABB=ON  PLU=ON  L41 AND POLAR/TI



L32      101597 SEA FILE=BIOSIS ABB=ON  PLU=ON  GLYCOLIPIDS OR LIPIDS OR
                GANGLIOSIDES OR GLYCOSPHINGOLIPIDS
L33      377403 SEA FILE=BIOSIS ABB=ON  PLU=ON  SEPARAT?
L35       65115 SEA FILE=BIOSIS ABB=ON  PLU=ON  SOLVENT
L36       31451 SEA FILE=BIOSIS ABB=ON  PLU=ON  (PLANT OR ANIMAL) (W) (CELL OR
                TISSUE)
L37     1334773 SEA FILE=BIOSIS ABB=ON  PLU=ON  EXTRACT? OR ISOLAT? OR PURIF?
L44          11 SEA FILE=BIOSIS ABB=ON  PLU=ON  L32 (5A) (L33 OR L37) AND L35
                AND L36


=> s l42 or l44
L75          12 L42 OR L44

=> file medline; d que l49; d que l50; d que l54
FILE 'MEDLINE' ENTERED AT 15:46:35 ON 12 JUL 2005

 FILE LAST UPDATED: 9 JUL 2005 (20050709/UP).  FILE COVERS 1950 TO DATE.

 On December 19, 2004, the 2005 MeSH terms were loaded.

 The MEDLINE reload for 2005 is now available.  For details enter HELP
 RLOAD at an arrow promt (=>).  See also:

    http://www.nlm.nih.gov/mesh/
    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

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 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2005 vocabulary.

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L45       31536 SEA FILE=MEDLINE ABB=ON  PLU=ON  GLYCOLIPIDS+NT/CT
L46       28685 SEA FILE=MEDLINE ABB=ON  PLU=ON  CELL SEPARATION+NT/CT
L47        7004 SEA FILE=MEDLINE ABB=ON  PLU=ON  OSMOTIC PRESSURE/CT
L48       21234 SEA FILE=MEDLINE ABB=ON  PLU=ON  SOLVENTS/CT
L49           0 SEA FILE=MEDLINE ABB=ON  PLU=ON  L45 AND L46 AND L47 AND L48



L45       31536 SEA FILE=MEDLINE ABB=ON  PLU=ON  GLYCOLIPIDS+NT/CT
L46       28685 SEA FILE=MEDLINE ABB=ON  PLU=ON  CELL SEPARATION+NT/CT
L47        7004 SEA FILE=MEDLINE ABB=ON  PLU=ON  OSMOTIC PRESSURE/CT
L48       21234 SEA FILE=MEDLINE ABB=ON  PLU=ON  SOLVENTS/CT
L50           0 SEA FILE=MEDLINE ABB=ON  PLU=ON  L45 AND L46 AND (L47 OR L48)
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L47         7004 SEA FILE=MEDLINE ABB=ON  PLU=ON  OSMOTIC PRESSURE/CT
L48        21234 SEA FILE=MEDLINE ABB=ON  PLU=ON  SOLVENTS/CT
L51        25372 SEA FILE=MEDLINE ABB=ON  PLU=ON  GLYCOLIP? OR GANGLIOS? OR
                 GLYCOSPHINGO?
L52      1408491 SEA FILE=MEDLINE ABB=ON  PLU=ON  SEPARAT? OR ISOLAT? OR PURIF?
                 OR SEPN
L53         1607 SEA FILE=MEDLINE ABB=ON  PLU=ON  L51 (5A) L52
L54           20 SEA FILE=MEDLINE ABB=ON  PLU=ON  L53 AND (L47 OR L48)


=> file embase; d que l59; d que l63
FILE 'EMBASE' ENTERED AT 15:47:12 ON 12 JUL 2005
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L55        18932 SEA FILE=EMBASE ABB=ON  PLU=ON  GLYCOLIPID+NT/CT
L56         3761 SEA FILE=EMBASE ABB=ON  PLU=ON  CELL SEPARATION+NT/CT
L57         2110 SEA FILE=EMBASE ABB=ON  PLU=ON  OSMOTIC PRESSURE/CT
L58        14480 SEA FILE=EMBASE ABB=ON  PLU=ON  SOLVENT/CT
L59            0 SEA FILE=EMBASE ABB=ON  PLU=ON  L55 AND L56 AND ((L57 OR L58))



L57         2110 SEA FILE=EMBASE ABB=ON  PLU=ON  OSMOTIC PRESSURE/CT
L58        14480 SEA FILE=EMBASE ABB=ON  PLU=ON  SOLVENT/CT
L60        19421 SEA FILE=EMBASE ABB=ON  PLU=ON  GLYCOLIP? OR GANGLIOS? OR
                 GLYCOSPHINGO?
L61      1029779 SEA FILE=EMBASE ABB=ON  PLU=ON  SEPARAT? OR ISOLAT? OR PURIF?
                 OR SEPN
L62         1387 SEA FILE=EMBASE ABB=ON  PLU=ON  L60 (5A) L61
L63           10 SEA FILE=EMBASE ABB=ON  PLU=ON  L62 AND ((L57 OR L58))


=> file wpix; d que l73
FILE 'WPIX' ENTERED AT 15:47:21 ON 12 JUL 2005
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FILE LAST UPDATED:          7 JUL 2005      <20050707/UP>
MOST RECENT DERWENT UPDATE:     200543        <200543/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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    DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX
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    PLEASE CHECK:
http://thomsonderwent.com/support/dwpiref/reftools/classification/code-revision/
    FOR DETAILS. <<<


L64        22955 SEA FILE=WPIX ABB=ON  PLU=ON  GLYCOLIP? OR GANGLIOS? OR
                 GLYCOSPHINGO? OR LIPID
L65      1286670 SEA FILE=WPIX ABB=ON  PLU=ON  SEPARAT? OR ISOLAT? OR PURIF? OR
                 SEPN
L66        12576 SEA FILE=WPIX ABB=ON  PLU=ON  OSMOT? OR OSMOS?
L67       372527 SEA FILE=WPIX ABB=ON  PLU=ON  SOLVENT
L68       140665 SEA FILE=WPIX ABB=ON  PLU=ON  MEMBRANE
L71           31 SEA FILE=WPIX ABB=ON  PLU=ON  L64 (5A) L65 AND (L66 OR L67)
                 AND L68
L72            6 SEA FILE=WPIX ABB=ON  PLU=ON  L71 AND (PORE OR PPTN OR EASY OR
                 ULTRAFIL? OR OSMOSIS)/TI
L73            5 SEA FILE=WPIX ABB=ON  PLU=ON  L72 NOT HYBRIDOMA?/TI


=> dup rem l54 l74 l75 l63 l73
FILE 'MEDLINE' ENTERED AT 15:48:06 ON 12 JUL 2005

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PROCESSING COMPLETED FOR L54
PROCESSING COMPLETED FOR L74
PROCESSING COMPLETED FOR L75
PROCESSING COMPLETED FOR L63
PROCESSING COMPLETED FOR L73
L76           64 DUP REM L54 L74 L75 L63 L73 (3 DUPLICATES REMOVED)
                 ANSWERS '1-20' FROM FILE MEDLINE
                 ANSWERS '21-40' FROM FILE HCAPLUS
                 ANSWERS '41-52' FROM FILE BIOSIS
                 ANSWERS '53-60' FROM FILE EMBASE
                 ANSWERS '61-64' FROM FILE WPIX

=> d ibib ed ab l76 1-60; d ibib ab abex l76 61-64
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L76 ANSWER 1 OF 64 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 97033875 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8879533
TITLE: Replacement of chloroform throughout **glycosphingolipid isolation.**
AUTHOR: Heitmann D; Lissel M; Kempken R; Muthing J
CORPORATE SOURCE: Institute of Cell Culture Technology, University of Bielefeld, Germany.
SOURCE: Biomedical chromatography : BMC, (1996 Sep-Oct) 10 (5) 245-50.
Journal code: 8610241. ISSN: 0269-3879.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199702
ENTRY DATE: Entered STN: 19970219
Last Updated on STN: 19970219
Entered Medline: 19970204
ED Entered STN: 19970219
Last Updated on STN: 19970219
Entered Medline: 19970204
AB Chloroform, the predominant constituent of solvents used for lipid extraction and chromatography, is believed to give rise to birth defects and serious damage to health, and may also be carcinogenic. Therefore, simple and successful methods have been developed to replace chloroform throughout the **isolation** of **glycosphingolipids** (GSLs) by less harmful solvents. Gangliosides of sheep brain (ganglio-series gangliosides GM1, GDla, GD1b and GT1b) and of lymphocyte-derived mouse hybridoma cells (namely GM3) were extracted with six different solvent mixtures. Chloroform:methanol:water (40:80:30, v/v/v) was employed as reference (solvent I). Combinations without chloroform were: n-propanol:water (40:10, v/v) (II), methylisobutylketone:methanol:water (40:80:30, v/v/v) (III), ethylacetate:methanol:water (40:72:28, v/v/v) (IV), methylacetate:methanol:water (40:72:28, v/v/v) (V) and petroleum ether:isopropanol:water (40:112:38, v/v/v) (VI). After extraction and dialysis, the weight of lipid extract as well as the content of sialic acid, gangliosides, sulphatides and phospholipids were determined. Quantitation of GSL yields in crude extracts obtained by the alternative solvent mixtures II to VI showed recoveries of brain gangliosides from nearly 67% up to 104% compared with the reference solvent I. Extraction of hybridoma cells by means of the alternative combinations without chloroform revealed at least the same and mostly better ganglioside yields in the range from 98% to 116% with regard to the reference solvent I. n-Propanol:water (II) and methylisobutylketone:methanol:water (III) were the recommended extractants for both tissues. Therefore, the methods described offer simple, less hazardous and successful strategies for GSL extraction in excellent yield without the need for using chloroform.

L76 ANSWER 2 OF 64 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 94187671 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8139508
TITLE: **Isolation** of **glycosphingolipids.**
AUTHOR: Schnaar R L
CORPORATE SOURCE: Department of Pharmacology and Neuroscience, Johns Hopkins School of Medicine, Baltimore, Maryland 21205.
SOURCE: Methods in enzymology, (1994) 230 348-70.
Journal code: 0212271. ISSN: 0076-6879.
PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199404
ENTRY DATE: Entered STN: 19940509
Last Updated on STN: 19940509
Entered Medline: 19940428
ED Entered STN: 19940509
Last Updated on STN: 19940509
Entered Medline: 19940428

L76 ANSWER 3 OF 64 MEDLINE on STN
ACCESSION NUMBER: 2000513646 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11070867
TITLE: **Purification** and analysis of **gangliosides**
.
AUTHOR: Ladisch S; Li R
CORPORATE SOURCE: Center for Cancer and Transplantation Biology, George Washington University School of Medicine, Washington, DC 20010-2970, USA.
CONTRACT NUMBER: CA 42361 (NCI)
SOURCE: Methods in enzymology, (2000) 312 135-45.
Journal code: 0212271. ISSN: 0076-6879.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200103
ENTRY DATE: Entered STN: 20010404
Last Updated on STN: 20010404
Entered Medline: 20010301
ED Entered STN: 20010404
Last Updated on STN: 20010404
Entered Medline: 20010301

L76 ANSWER 4 OF 64 MEDLINE on STN
ACCESSION NUMBER: 91035345 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2229021
TITLE: Gangliosides from the eggs of the sea urchin, Anthocidaris crassispina.
AUTHOR: Kubo H; Irie A; Inagaki F; Hoshi M
CORPORATE SOURCE: Department of Life Science, Faculty of Science, Tokyo Institute of Technology.
SOURCE: Journal of biochemistry, (1990 Aug) 108 (2) 185-92.
Journal code: 0376600. ISSN: 0021-924X.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199012
ENTRY DATE: Entered STN: 19910208
Last Updated on STN: 19910208
Entered Medline: 19901227
ED Entered STN: 19910208
Last Updated on STN: 19910208
Entered Medline: 19901227
AB NeuGc alpha 2-6Glc beta 1-1Cer (M5 ganglioside) and HSO3-8NeuGc alpha 2-6Glc beta 1-1Cer (T1 **ganglioside**) were **purified** by column chromatographies with DEAE-Sephadex A-25 and silicic acid from the

eggs of the sea urchin, Anthocidaris crassispina. Their chemical structures were determined by gas-liquid chromatography, methylation analysis, enzymatic hydrolysis, negative-ion fast atom bombardment mass spectrometry, and proton nuclear magnetic resonance spectroscopy. Long-chain base compositions of both gangliosides were almost identical: all the long-chain bases were phytosphingosines, and C18-phytosphingosine accounted for more than 95% of them. Fatty acid compositions were also very similar: the main fatty acids were 22:1, 23:1, 24:1, and their 2-hydroxylated forms, and the 2-hydroxy fatty acids amounted to 65.3 and 74.3% of the fatty acids in M5 and T1 gangliosides, respectively. Proton nuclear magnetic resonance spectroscopic study revealed a downfield-shifted H8 proton signal of NeuGc residue in T1 ganglioside, in agreement with the presence of sulfate ester at the C8 position.

L76 ANSWER 5 OF 64 MEDLINE on STN
ACCESSION NUMBER: 91023451 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2221368
TITLE: Gangliosides noncovalently bound to DEAE-Sephadex: application to **purification** of anti-**ganglioside** antibodies.
AUTHOR: Rodriguez P E; Cumar F A
CORPORATE SOURCE: Departamento de Quimica Biologica, CIQUIBIC, Facultad de Ciencias Quimicas, CONICET, Universidad Nacional de Cordoba, Argentina.
SOURCE: Analytical biochemistry, (1990 Jul) 188 (1) 48-52. Journal code: 0370535. ISSN: 0003-2697.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199011
ENTRY DATE: Entered STN: 19910117
Last Updated on STN: 19910117
Entered Medline: 19901107
ED Entered STN: 19910117
Last Updated on STN: 19910117
Entered Medline: 19901107
AB A simple, rapid, effective, and inexpensive method for the purification of ligands having high affinity for gangliosides has been developed. DEAE-Sephadex has a high capacity for binding gangliosides (approx 1/1.6, w/w). The gangliosides, bound to the support by electrostatic and hydrophobic interactions, showed a high resistance, in an aqueous environment, to being detached by eluants commonly employed to desorb ligands (i.e., low or high pH or chaotropic agent solutions) or by nonionic detergent solutions as well as by organic solvents. The DEAE-Sephadex-ganglioside complex was assayed as an immunoadsorbent for **purifying** anti-GM1 **ganglioside** antibodies from serum of an immunized rabbit. The specific activity of the purified antibodies was 200- to 400-fold higher, and the recovery of the anti-ganglioside activity was above 50%, with respect to the untreated antiserum. The preparation of the complex and the purification of the antibodies can be done in less than 5 h. The glycolipids from the complex can be recovered by elution with organic solvents containing salt or volatile base solutions, and reused. In principle, this method can be adapted for other anionic amphipathic receptor molecules to purify ligands which bind to them.

L76 ANSWER 6 OF 64 MEDLINE on STN
ACCESSION NUMBER: 88087635 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3693462

TITLE: New solvent system for high-performance thin-layer chromatography and high-performance liquid chromatography of gangliosides.
AUTHOR: Ando S; Waki H; Kon K
CORPORATE SOURCE: Department of Biochemistry, Tokyo Metropolitan Institute of Gerontology, Japan.
SOURCE: Journal of chromatography, (1987 Sep 18) 405 125-34.
Journal code: 0427043. ISSN: 0021-9673.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198801
ENTRY DATE: Entered STN: 19900305
Last Updated on STN: 19900305
Entered Medline: 19880127

ED Entered STN: 19900305
Last Updated on STN: 19900305
Entered Medline: 19880127

AB New solvent systems consisting of acetonitrile, isopropanol and aqueous 50 mM potassium chloride or 2.5 M ammonium hydroxide were developed for the **separation** of **gangliosides** by high-performance thin-layer chromatography. These solvent systems seem to be superior for the resolution of polysialogangliosides such as tetra-, penta- and hexasialo species, as compared to chloroform-methanol-aqueous salt systems. The order of mobility of gangliosides in the ammoniacal solvent system is GD3 greater than GD1a greater than GM1 greater than GT1b greater than GD1b as compared with GM1 greater than GD3, GD1a greater than GD1b greater than GT1b in the neutral septem. A combination of these two solvent systems provides excellent two-dimensional **separations** of complex **ganglioside** mixtures. The neutral solvent system, acetonitrile-isopropanol-aqueous 50 mM potassium chloride, can be used for the **separation** of underivatized **gangliosides** by high-performance liquid chromatography on an Aquasil SS silica gel column. Ganglioside elution can be monitored at 208 nm because of the good UV-transparency of the effluent.

L76 ANSWER 7 OF 64 MEDLINE on STN
ACCESSION NUMBER: 85208073 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3838996
TITLE: **Separation** of **gangliosides** by anion-exchange chromatography on Mono Q.
AUTHOR: Mansson J E; Rosengren B; Svennerholm L
SOURCE: Journal of chromatography, (1985 Apr 10) 322 (3) 465-72.
Journal code: 0427043. ISSN: 0021-9673.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198507
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19900320
Entered Medline: 19850725

ED Entered STN: 19900320
Last Updated on STN: 19900320
Entered Medline: 19850725

AB A new type of strong anion-exchange resin, Mono Q, has been used in the **separation** of brain **gangliosides**. The resin consists of monodisperse particles (9.8 micron) and was used in prepacked columns with

a bed volume of 1 ml. The **gangliosides** were **separated** into mono-, di-, tri- and tetrasialoganglioside fractions by a discontinuous gradient of potassium acetate in methanol. The separation was complete in a volume of 50 ml. The major advantages of the new procedure compared to conventional methods are the shorter separation time, higher loading capacity and recovery of **separated ganglioside** fractions in small solvent volumes. The procedure was applied to the **separation** of **gangliosides** from normal human and GM2-gangliosidosis brain.

L76 ANSWER 8 OF 64 MEDLINE on STN
ACCESSION NUMBER: 85196792 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3993932
TITLE: A solvent partition method for microscale **ganglioside purification.**
AUTHOR: Ladisch S; Gillard B
CONTRACT NUMBER: 1KO4 CA 00821 (NCI)
CA 27701 (NCI)
HD18171 (NICHD)
SOURCE: Analytical biochemistry, (1985 Apr) 146 (1) 220-31.
Journal code: 0370535. ISSN: 0003-2697.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198506
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19980206
Entered Medline: 19850619
ED Entered STN: 19900320
Last Updated on STN: 19980206
Entered Medline: 19850619
AB A simple and rapid method for the **purification** of **gangliosides** from the total lipid extract of plasma, cells, or tissue is described. The novel component of the method is the partition of the dried total lipid extract in the three-component solvent system consisting of diisopropyl ether, 1-butanol, and 50 mM aqueous NaCl (6/4/5, v/v/v). Gangliosides partition nearly quantitatively into the lower aqueous phase, and other lipids into the upper organic phase, resulting from the mixture of these three solvents. The ganglioside-containing aqueous phase is then freed of salts and other low-molecular-weight impurities by gel filtration. The thin-layer chromatographic patterns of total gangliosides thus obtained are clear and distinct, even when small samples with very low ganglioside concentrations (e.g., 1-ml samples of plasma) are processed by this method. Thus, this new **ganglioside purification** method is especially applicable to comparative qualitative studies of gangliosides requiring the analysis of multiple small samples.

L76 ANSWER 9 OF 64 MEDLINE on STN
ACCESSION NUMBER: 84304986 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6476375
TITLE: One-step fractionation of neutral and acidic glycosphingolipids by high-performance liquid chromatography.
AUTHOR: Watanabe K; Tomono Y
SOURCE: Analytical biochemistry, (1984 Jun) 139 (2) 367-72.
Journal code: 0370535. ISSN: 0003-2697.
PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198409
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19900320
Entered Medline: 19840926

ED Entered STN: 19900320
Last Updated on STN: 19900320
Entered Medline: 19840926

AB A procedure for a simultaneous **separation** of **ganglioside** components and neutral **glycolipid** components by high-performance liquid chromatography was described. One column packed with DEAE-derivatized controlled-pore glass (DEAE-CPG) was serially connected to two columns of underivatized, controlled-pore glass (CPG). A mixture of gangliosides and neutral glycolipids were loaded on DEAE-CPG and eluted with a mixture of chloroform-methanol-water, with increasing methanol and water (the first-phase gradient elution), followed by elution with increasing concentrations lithium acetate from 0.015 to 0.1 M in a mixture of chloroform-methanol-water (the second-phase gradient elution). Neutral **glycolipids**, mono- to hexaglycosylceramides , were **separated** within 80 min of the first-phase gradient elution, and mono- to tetrasialosylgangliosides were separated during the second-phase gradient elution within 60 min. The method has been applied to the determination of **glycolipids isolated** from rat tissues, and the procedure was found to be highly reproducible.

L76 ANSWER 10 OF 64 MEDLINE on STN
ACCESSION NUMBER: 85146788 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6528990
TITLE: A rapid preparative method for **isolation** of neutral and acidic **glycosphingolipids** by radial thin-layer chromatography.
AUTHOR: Das K K; Basu M; Basu S
CONTRACT NUMBER: CA-14764 (NCI)
IR23CA-33751 (NCI)
NS-18005 (NINDS)
SOURCE: Analytical biochemistry, (1984 Nov 15) 143 (1) 125-34.
Journal code: 0370535. ISSN: 0003-2697.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198503
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19970203
Entered Medline: 19850327

ED Entered STN: 19900320
Last Updated on STN: 19970203
Entered Medline: 19850327

AB An efficient method to **separate** neutral and acidic **glycosphingolipids** (GSLs) from their mixtures within a short period (45-60 min) and with low consumption of solvents (chloroform-methanol-water, 60/35/8 (v/v/v); 250-500 ml) has been developed. This method utilizes a centrifugal thin-layer chromatograph (Chromatotron) and the GSL mixtures (30-400 mg) are applied to glass plates coated with a 1-mm layer of silica gel 60 PF-254. The method (radial thin-layer chromatography) is rapid and simple and the recovery of glycosphingolipids is high (70-80%).

L76 ANSWER 11 OF 64 MEDLINE on STN
ACCESSION NUMBER: 83057225 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7142330
TITLE: Rapid **separation** of **gangliosides** by high-performance liquid chromatography.
AUTHOR: Kundu S K; Scott D D
CONTRACT NUMBER: A 05336
SOURCE: Journal of chromatography, (1982 Oct 8) 232 (1) 19-27. Journal code: 0427043. ISSN: 0021-9673.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198301
ENTRY DATE: Entered STN: 19900317
Last Updated on STN: 19900317
Entered Medline: 19830107
ED Entered STN: 19900317
Last Updated on STN: 19900317
Entered Medline: 19830107
AB We have developed a high-performance liquid chromatographic (HPLC) procedure for the rapid **separation** of individual **ganglioside** components on a 5-micron porous silica gel column using a mixture of isopropanol-hexane-water with increasing water content and decreasing hexane content. Total ganglioside mixtures were first fractionated on DEAE-silica gel according to the number of sialic acid residues. Each fraction was then **separated** into individual **ganglioside** components by HPLC. Total elution time was less than 2 h. This procedure has been applied for the **separation** of major **ganglioside** components of human erythrocytes and beef brain and is highly reproducible.

L76 ANSWER 12 OF 64 MEDLINE on STN
ACCESSION NUMBER: 82009340 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6268725
TITLE: A new solvent system for the **separation** of neutral **glycosphingolipids**.
AUTHOR: Watanabe K; Arao Y
SOURCE: Journal of lipid research, (1981 Aug) 22 (6) 1020-4. Journal code: 0376606. ISSN: 0022-2275.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198111
ENTRY DATE: Entered STN: 19900316
Last Updated on STN: 19980206
Entered Medline: 19811122
ED Entered STN: 19900316
Last Updated on STN: 19980206
Entered Medline: 19811122
AB A solvent system and a column for high performance liquid chromatography for the **separation** of **glycosphingolipids** without derivatization is described. A column pakced with porous silica gel (latrobeads) and eluted with a mixture of isopropanol-hexane-water with increasing water content and decreasing hexane content was used. Glycosphingolipids with mono- to dodeca- or tetrakaidecasaccharides were separated within 60 min and the separation pattern was highly

reproducible. The method was applied for preparative **separation** of highly complex **glycolipids** with blood group activity.

L76 ANSWER 13 OF 64 MEDLINE on STN
ACCESSION NUMBER: 78123590 MEDLINE
DOCUMENT NUMBER: PubMed ID: 606237
TITLE: The biosynthesis of brain **gangliosides**. **Separation** of membranes with different ratios of ganglioside sialylating activity to gangliosides.
AUTHOR: Landa C A; Maccioni H J; Arce A; Caputto R
SOURCE: Biochemical journal, (1977 Dec 15) 168 (3) 325-32. Journal code: 2984726R. ISSN: 0264-6021.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197804
ENTRY DATE: Entered STN: 19900314
Last Updated on STN: 19900314
Entered Medline: 19780417
ED Entered STN: 19900314
Last Updated on STN: 19900314
Entered Medline: 19780417
AB Brain subcellular fractions were analysed for ganglioside-sialylating activity by measuring the incorporation of N-[3H]acetylneuraminic acid from CMP-N-[3H]acetylneuraminic acid into endogenous ganglioside acceptors (endogenous incorporation) and into exogenous lactosyceramide (haematoside synthetase activity). The ratios of endogenous incorporation to gangliosides and of haematoside synthetase to gangliosides for the synaptosomal and mitochondrial fractions from a washed crude mitochondrial fraction were lower than those obtained for other membrane fractions. The differences appear to reflect intrinsic characteristics of each membrane fraction. The results of labelling in vitro and the time course of labelling of gangliosides of the different subcellular fractions in vivo after injection of N-[3H]acetylmannosamine are consistent with the possibility of a subcellular site for synthesis of gangliosides different from that of ganglioside deposition.

L76 ANSWER 14 OF 64 MEDLINE on STN
ACCESSION NUMBER: 76237718 MEDLINE
DOCUMENT NUMBER: PubMed ID: 950356
TITLE: Ascending dry-column chromatography as an aid in the preparative **isolation** of **glycolipids**.
AUTHOR: Viswanathan C V; Hayashi A
SOURCE: Journal of chromatography, (1976 Jul 21) 123 (1) 243-6. Journal code: 0427043. ISSN: 0021-9673.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197610
ENTRY DATE: Entered STN: 19900313
Last Updated on STN: 19900313
Entered Medline: 19761002
ED Entered STN: 19900313
Last Updated on STN: 19900313
Entered Medline: 19761002

L76 ANSWER 15 OF 64 MEDLINE on STN

ACCESSION NUMBER: 75211590 MEDLINE
DOCUMENT NUMBER: PubMed ID: 168218
TITLE: Thin-layer chromatographic **separation** of **gangliosides.**
AUTHOR: Eberlein K; Gercken G
SOURCE: Journal of chromatography, (1975 Mar 26) 106 (2) 425-7.
Journal code: 0427043. ISSN: 0021-9673.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197511
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19751108
ED Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19751108

L76 ANSWER 16 OF 64 MEDLINE on STN
ACCESSION NUMBER: 73140211 MEDLINE
DOCUMENT NUMBER: PubMed ID: 4734896
TITLE: **Isolation** and characterization of **glycosphingolipids** with blood group H specificity from membranes of human erythrocytes.
AUTHOR: Stellner K; Watanabe K; Hakomori S
SOURCE: Biochemistry, (1973 Feb) 12 (4) 656-61.
Journal code: 0370623. ISSN: 0006-2960.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197305
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19730508
ED Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19730508

L76 ANSWER 17 OF 64 MEDLINE on STN
ACCESSION NUMBER: 74062601 MEDLINE
DOCUMENT NUMBER: PubMed ID: 4765308
TITLE: A densitometric method for the determination of **gangliosides** after their **separation** by thin-layer chromatography and detection with resorcinol reagent.
AUTHOR: Smid F; Reinisova J
SOURCE: Journal of chromatography, (1973 Nov 7) 86 (1) 200-4.
Journal code: 0427043. ISSN: 0021-9673.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197402
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19740222
ED Entered STN: 19900310

Last Updated on STN: 19900310
Entered Medline: 19740222

L76 ANSWER 18 OF 64 MEDLINE on STN
ACCESSION NUMBER: 70227553 MEDLINE
DOCUMENT NUMBER: PubMed ID: 5426325
TITLE: Thin-layer chromatographic **separation** of **glycolipids** in animal lipid mixtures.
AUTHOR: Neskovic N M; Nussbaum J L; Mandel P
SOURCE: Journal of chromatography, (1970 Jun 3) 49 (2) 255-61. Journal code: 0427043. ISSN: 0021-9673.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197008
ENTRY DATE: Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19700821
ED Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19700821

L76 ANSWER 19 OF 64 MEDLINE on STN
ACCESSION NUMBER: 68044958 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6057492
TITLE: Quantitative determination of the neutral glycosyl ceramides in human blood.
AUTHOR: Vance D E; Sweeley C C
SOURCE: Journal of lipid research, (1967 Nov) 8 (6) 621-30. Journal code: 0376606. ISSN: 0022-2275.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 196801
ENTRY DATE: Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19680112
ED Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19680112
AB A method is described for the qualitative and quantitative estimation of four neutral glycosyl ceramides from human plasma and erythrocytes. Total lipids extracted from 50 ml of plasma or packed erythrocytes were separated by silicic acid chromatography into neutral lipids, a fraction of mixed glycolipids that was eluted with acetone-methanol 9:1, and phospholipids. After mild alkali-catalyzed methanolysis to remove contaminants from the crude fraction of **glycolipids**, individual glycosyl ceramides were **isolated** by preparative thin-layer chromatography. The oligosaccharide portions of these lipids were characterized by cleavage with methanolic hydrogen chloride and gas chromatography of the O-trimethylsilyl methyl glycosides. It was possible to study the composition of the carbohydrate and sphingolipid base fractions in the same gas chromatographic analysis. With mannitol as an internal standard for gas chromatographic estimation of glucose, concentrations of each of the glycosyl ceramides were determined with a precision of about 10%. Recoveries of the lipids from plasma varied with the complexity of the oligosaccharide moiety and ranged from 94% with

glucosyl ceramide to 71% with globoside. Concentrations of the four glycosyl ceramides in plasma and in erythrocytes were determined for samples from young, healthy males. Amounts of glycolipid as low as 0.1 micromole can be determined conveniently by this procedure.

L76 ANSWER 20 OF 64 MEDLINE on STN
ACCESSION NUMBER: 67208783 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6033595
TITLE: **Separation** of neutral **glycosphingolipids** and sulfatides by thin-layer chromatography.
AUTHOR: Skipski V P; Smolowe A F; Barclay M
SOURCE: Journal of lipid research, (1967 Jul) 8 (4) 295-9. Journal code: 0376606. ISSN: 0022-2275.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 196710
ENTRY DATE: Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19671007
ED Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19671007
AB Two one-dimensional systems for **separation** of **glycolipids** from total lipid extracts of tissues by thin-layer chromatography are described. System I used, as adsorbent, an alkaline mixture of silica gel without CaSO(4) binder (75%) and magnesium silicate (25%), and the lipids were "developed" with three successive solvent mixtures. The separated compounds (from the fastest to the slowest moving) were: ceramide, ceramide monohexosides, sulfatides, ceramide dihexosides, psychosine, ceramide trihexosides, and ceramide N-acetylhexosamine trihexosides. In system II a two-step development was used on an adsorbent consisting of silica gel without CaSO(4) binder (80%) and magnesium silicate (20%). The separated compounds were: ceramides, ceramide monohexosides, and ceramide dihexosides. Psychosine and sulfatides as well as ceramide trihexosides and ceramide N-acetylhexosamine trihexosides were not separated. In both systems all neutral lipids moved to the very top of the chromatogram and phospholipids stayed at the origin. Application of systems I and II for **separation** of **glycolipids** was demonstrated on total lipid extracts from animal tissues.

L76 ANSWER 21 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2003:335114 HCAPLUS
DOCUMENT NUMBER: 138:334037
TITLE: Method for **separating glycolipids** with mixture solvent
INVENTOR(S): Ishikawa, Takahiro; Yamaguchi, Akira; Suzuki, Kyoko; Katsuyama, Kayoko
PATENT ASSIGNEE(S): Japan
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2003035658	A1	20030501	WO 2001-JP11281	20011221
W: AU, CA, CN, IN, KR, RU, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
JP 2003129083	A2	20030508	JP 2001-321157	20011018
US 2005119475	A1	20050602	US 2004-825210	20040416
PRIORITY APPLN. INFO.:			JP 2001-321157 A	20011018
			WO 2001-JP11281 A	20011221

ED Entered STN: 02 May 2003

AB A method for **separating glycolipids** (especially, **gangliosides**) is provided, with which a large number of samples are conveniently and economically treated, and many types of glycolipids are recovered with high yield. The method comprises: (a) a step for performing the hydrolysis treatment of the extract obtained by extracting a biol. sample (e.g., animal/plant cell, tissue, microorganism) with a mixture liquid of nonpolar solvents (e.g., chloroform, pyridine) and polar solvents (e.g., water, methanol), and bringing the sample solution obtained into a contact with a solution having the osmotic pressure lower than the sample solution via a semipermeable membrane; and (b) a step for continuing the contact until the sample solution is separated into two or three layers, and isolating the intermediate layer and/or the lower layer.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 22 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:141218 HCAPLUS

DOCUMENT NUMBER: 142:214867

TITLE: MMH (Met Murine Hepatocyte)-conditioned culture medium for maintenance, proliferation and differentiation of mammalian cells for therapeutic or fermentation uses

INVENTOR(S): Bordoni, Veronica; Alonzi, Tonino; Tripodi, Marco

PATENT ASSIGNEE(S): Istituto Nazionale per le Malattie Infettive 'Lazzaro Spallanzani', Italy

SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005014799	A1	20050217	WO 2004-EP51758	20040810
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:			IT 2003-RM395 A	20030812

ED Entered STN: 18 Feb 2005

AB The invention relates to a conditioned cell culture medium and a

corresponding method to obtain it. The invention also refers to methods of using this cell conditioned medium for the maintenance, proliferation and differentiation of mammalian cells. The culture medium produced in accordance with the present invention is conditioned by the cell secretion activity of murine cells, in particular, those differentiated and immortalized transgenic hepatocytes, named MMH (Met Murine Hepatocyte). These media are employed in in vitro cell culture systems to induce maintenance, proliferation and differentiation of mammalian cells. The cells named MMH are differentiated non transformed murine hepatocytes that produce important biol. mols. (e.g., cytokines and growth factors) and, in accordance with the present invention, they are used in in vitro cell culture systems for the maintenance, proliferation and differentiation of mammalian cells. The mammalian cells of the invention can be used for the production of biomols., for transplantation, or in cellular therapy protocols.
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 23 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:422880 HCAPLUS
DOCUMENT NUMBER: 142:462364
TITLE: Process for **separating** sterols and polar **lipids** from lecithin by ultrafiltration and pretreatment by glycolytic enzymes
INVENTOR(S): Both, Sabine; Alexandre, Teresa; Gutsche, Bernhard; Kray, Juergen; Beverungen, Carsten; Eickenberg, Rainer
PATENT ASSIGNEE(S): Cognis Deutschland G.m.b.H. & Co. K.-G., Germany
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1531182	A2	20050518	EP 2004-26275	20041105
EP 1531182	A3	20050601		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR, IS, YU				
DE 10353150	A1	20050616	DE 2003-10353150	20031114
US 2005130281	A1	20050616	US 2004-988743	20041115

PRIORITY APPLN. INFO.: DE 2003-10353150 A 20031114
ED Entered STN: 19 May 2005
AB A process is provided for the **sepn** of sterols and polar **lipids** from plant lecithins treated with glycolytic enzymes. The process consists of treating plant oils containing lecithin with an enzyme such as α-amylase or β-glucosidase to hydrolyze the sterol glucosides. The treated material is then diafiltered in an ultrafilter. The ultrafilter permeate is then extracted with hexane to sep. the sterols. Hexane extraction of the ultrafilter retentate provides a phospholipid mixture

L76 ANSWER 24 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:5828 HCAPLUS
DOCUMENT NUMBER: 138:78522
TITLE: Systems and methods using a **solvent** for the removal of lipids from fluids
INVENTOR(S): Bomberger, David C.; Chavez, Bryan; Garcia, Pablo E.; Hegwer, Eric; Low, Thomas P.; Malholtra, Ripudaman;

Shimon, Jeffrey J.; Venturelli, Anne
PATENT ASSIGNEE(S): Lipid Sciences, Inc., USA
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003000373	A1	20030103	WO 2002-US19643	20020621
WO 2003000373	C2	20040212		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2451633	AA	20030103	CA 2002-2451633	20020621
US 2003104350	A1	20030605	US 2002-178899	20020621
US 2003127386	A1	20030710	US 2002-178773	20020621
EP 1412045	A1	20040428	EP 2002-744496	20020621
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004532709	T2	20041028	JP 2003-507014	20020621
US 2004217047	A1	20041104	US 2004-856046	20040528
US 2004256307	A1	20041223	US 2004-856211	20040528
US 2005016912	A1	20050127	US 2004-857534	20040528

PRIORITY APPLN. INFO.:	US 2001-301159P	P	20010625
	US 2002-346094P	P	20020102
	US 2001-300927P	P	20010625
	US 2001-301108P	P	20010625
	US 2001-301109P	P	20010625
	US 2001-301112P	P	20010625
	US 2002-387281P	P	20020607
	US 2002-178900	A3	20020621
	WO 2002-US19643	W	20020621

ED Entered STN: 05 Jan 2003
AB Systems and methods for removing lipids from a fluid, such as plasma, or from lipid-containing organisms. A fluid is combined with at least one extraction solvent, which causes the **lipids** to **sep.** from the fluid or from **lipid**-containing organisms. The **separated lipids** are removed from the fluid. The extraction solvent is removed from the fluid or at least reduced to an acceptable concentration enabling the delipidated fluid to be administered to a patient without the patient experiencing undesirable consequences. Once the fluid was processed, the fluid may be administered to a patient who donated the fluid, to a different patient, or stored for later use.
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 25 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:18436 HCAPLUS

DOCUMENT NUMBER: 140:286551
TITLE: **Isolation** of food-grade phospholipid product by **solvent** fractionation
INVENTOR(S): Petrik, A. A.; Kornena, E. P.; Gerasimenko, E. O.; Butina, E. A.; Konstantinov, E. N.; Cherkasov, V. N.; Bondarenko, I. N.; Bondarenko, S. V.; Lobanov, A. A.
PATENT ASSIGNEE(S): Obshchestvo S Ogranichennoi Otvetstvennost'yu "Uchebno-Nauchno-Proizvodstvennaya Firma "Lipidy", Russia
SOURCE: Russ., No pp. given
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2216193	C1	20031120	RU 2002-105431	20020228
PRIORITY APPLN. INFO.:			RU 2002-105431	20020228

ED Entered STN: 09 Jan 2004
AB A food-grade phospholipid product is obtained by heating a plant phospholipid concentrate (e.g., from sunflower seeds) at 30-75°; mixing with organic solvent (e.g., acetone); **separating** the phases into a neutral **lipid** solution in the solvent and phospholipids; and drying the phospholipids. Mixing of plant phospholipid concs. with organic solvent is performed once at a ratio of phospholipid to organic solvent of (1:2)-(1:5). After **separation** of the phases into neutral **lipid** solution in solvent and phospholipids, the latter are addnl. processed with organic solvent by providing an interaction between phospholipids and organic solvent in a countercurrent flow system at a phospholipid to organic solvent ratio of (1.0:0.4)-(1.0:2.0). Before processing, citric acid is added to the organic solvent at amts. of 0.5-5.0 g/kg phospholipid. The phospholipid product may be used for novel ready-to-eat products, or it may be used as a food additive. The isolation procedure is characterized by improved product quality, reduced consumption of organic solvent and reduced costs of organic solvent regeneration.

L76 ANSWER 26 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:888686 HCAPLUS
DOCUMENT NUMBER: 137:369116
TITLE: Production and use of a polar lipid-rich fraction containing omega-3 and/or omega-6 highly unsaturated fatty acids from microbes, genetically modified plant seeds and marine organisms
INVENTOR(S): Kohn, Gerhard; Banzhaf, Wulf; Abril, Jesus Ruben
PATENT ASSIGNEE(S): Martek Biosciences Boulder Corporation, USA
SOURCE: PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002092540	A1	20021121	WO 2002-US15454	20020514

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US,
UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2451116	AA	20021121	CA 2002-2451116	20020514
EP 1392623	A1	20040303	EP 2002-736881	20020514
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004536059	T2	20041202	JP 2002-589427	20020514
US 2005129739	A1	20050616	US 2003-487066	20020514
PRIORITY APPLN. INFO.:			US 2001-290899P	P 20010514
			WO 2002-US15454	W 20020514

ED Entered STN: 22 Nov 2002

AB The production and use, and in particular, the extraction, **separation**, synthesis and recovery of polar **lipid**-rich fractions containing eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA), docosapentaenoic acid (DPA(n-3) or DPA(n-6)), arachidonic acid (ARA), and eicosatetraenoic acid (C20:4n-3) from microorganisms, genetically modified seeds and marine organisms (including fish and squid) and their use in human food, animal feed, pharmaceutical and cosmetic applications is described.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 27 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:888545 HCAPLUS
DOCUMENT NUMBER: 137:352000
TITLE: Production and use of a polar lipid-rich fraction containing stearidonic acid and gamma linolenic acid from plant seeds and microbes
INVENTOR(S): Kohn, Gerhard; Banzhaf, Wulf; Abril, Jesus Ruben
PATENT ASSIGNEE(S): Martek Biosciences Boulder Corporation, USA
SOURCE: PCT Int. Appl., 18 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002092073	A1	20021121	WO 2002-US15479	20020514
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2446059	AA	20021121	CA 2002-2446059	20020514
EP 1392278	A1	20040303	EP 2002-747838	20020514
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004536801	T2	20041209	JP 2002-588990	20020514

PRIORITY APPLN. INFO.: US 2001-291484P P 20010514
WO 2002-US15479 W 20020514
ED Entered STN: 22 Nov 2002
AB The production and use, and in particular the extraction, **separation**, synthesis and recovery of polar **lipid**-rich fractions containing gamma linolenic acid (GLA) and/or stearidonic acid (SDA) from seeds and microorganisms and their uses in human food applications, animal feed, pharmaceuticals and cosmetics are claimed.
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 28 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:717105 HCAPLUS
DOCUMENT NUMBER: 137:228938
TITLE: Process for the **extraction** of lipids from fatty bird tissues
INVENTOR(S): Beaudoin, Adrien; Martin, Genevieve
PATENT ASSIGNEE(S): Can.
SOURCE: U.S. Pat. Appl. Publ., 3 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002133033	A1	20020919	US 2001-37086	20011109
US 6521768	B2	20030218		
CA 2325377	AA	20020514	CA 2000-2325377	20001114
CA 2361349	AA	20020514	CA 2001-2361349	20011109

PRIORITY APPLN. INFO.: CA 2000-2325377 A 20001114
ED Entered STN: 20 Sep 2002
AB A method for the extraction of lipids from lipid containing tissues of a member of the bird species such as the ratite, gallinaceous or anatidae wherein the lipid containing tissues are comminuted and the lipids extracted in a solvent, preferably acetone or Et acetate, to provide a liquid fraction and a solid fraction and subsequently removing the solvent from the liquid fraction to provide a lipid rich component.

L76 ANSWER 29 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:196218 HCAPLUS
DOCUMENT NUMBER: 136:293798
TITLE: In situ solid phase **extraction** of phospholipids from heat-coagulated egg yolk by organic **solvents**
AUTHOR(S): Nielsen, H.
CORPORATE SOURCE: Department of Medical Biochemistry, University of Aarhus, Aarhus, DK-8000, Den.
SOURCE: Lebensmittel-Wissenschaft und -Technologie (2001), 34(8), 526-532
CODEN: LBWTAP; ISSN: 0023-6438
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 18 Mar 2002
AB Heat-coagulated egg yolk packed into a chromatog. tube allows solvents to be led through with satisfactory flow rate effecting continuous extraction

This system is conceived as in situ solid phase extraction of egg yolk lipids with denatured yolk protein constituting the matrix. The **sepns.** of **lipids** that can be effected by elution with properly chosen solvents confirmed this conception. Several elution schemes are presented. One of the most promising consists of initial elution with acetone yielding a lipid fraction containing all triglycerides and cholesterol and .apprx.15% of the phospholipids. Subsequent elution with ethanol yields the remaining 85% phospholipid highly purified. The contents of long-chain polyunsatd. fatty acid of n-6 and n-3 series in this product are 5-6 and 6-7 g/100 g, resp. The method described is discussed in relation to existing methodol. for production of egg yolk phospholipids. (c) 2001 Academic Press.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 30 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:911380 HCAPLUS
DOCUMENT NUMBER: 134:68439
TITLE: Procedure for **extraction** of lipids from biological material
INVENTOR(S): Strom, Terje; Jostensen, Jens-Petter
PATENT ASSIGNEE(S): Norway
SOURCE: PCT Int. Appl., 10 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000078903	A1	20001228	WO 2000-NO203	20000609
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
NO 9902794	A	20001211	NO 1999-2794	19990609
NO 309730	B1	20010319		
EP 1183322	A1	20020306	EP 2000-937390	20000609
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: NO 1999-2794 A 19990609
WO 2000-NO203 W 20000609

ED Entered STN: 29 Dec 2000

AB The invention relates to a gentle extraction of lipids, with an organic solvent, from biol. material, by mincing of the biol. material in the presence of an acid with subsequent addition of the solvent, or mincing in the presence of both the acid and the solvent after which the liquid phase is **separated** and **lipids** are recovered therefrom.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 31 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:113624 HCAPLUS
DOCUMENT NUMBER: 132:276099
TITLE: **Predicted separation** of **phospholipids** from soybean by chromatography on silica with changes in **solvent** composition
AUTHOR(S): Row, Kyung Ho; Lee, Ju Weon
CORPORATE SOURCE: Department of Chemical Engineering, Inha University, Inchon, 402-751, S. Korea
SOURCE: Separation Science and Technology (2000), 35(2), 271-286
CODEN: SSTEDS; ISSN: 0149-6395
PUBLISHER: Marcel Dekker, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 17 Feb 2000
AB Normal-phase HPLC was used to **sep.** the useful **phospholipids** phosphatidylethanolamine (PE), phosphatidylinositol (PI), and phosphatidylcholine (PC) from soybean lecithin. The mobile phase used in this experiment consisted of hexane, isopropanol, and methanol. The step-gradient mode was applied because the three components could not be separated by isocratic mode. To find the optimum separation conditions, the concentration profiles of effluents from a column were simulated by the retention factor and the plate theory in the step-gradient mode. The retention factor was correlated by the equation ln k' = A + BF + CF2 + DG + EG2, where the consts. A, B, C, D, and E were exptl. determined F and G are the volume fractions of isopropanol and methanol, resp. From the calculated results, PE was separated with hexane/isopropanol/methanol (90/5/5 vol%) in the isocratic mode, while PI and PC were resolved in the operating conditions of 15 min of gradient time and a second mobile phase of hexane/isopropanol/methanol (50/20/30 vol%) in the step-gradient mode. The agreement between the calculated concentration profile and the exptl. data was fairly good, so the methodol. developed in this work can be used to obtain useful separation conditions for stepwise elution.
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 32 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:267433 HCAPLUS
DOCUMENT NUMBER: 129:32587
TITLE: Induced separation of a binate vesicle into two independent entities
AUTHOR(S): Menger, Fredric M.; Lee, Stephen J.; Keiper, Jason S.
CORPORATE SOURCE: Department of Chemistry, Emory University, Atlanta, GA, 30322, USA
SOURCE: Chemical Communications (Cambridge) (1998), (9), 957-958
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 11 May 1998
AB Two lipid vesicles, one residing in the aqueous interior of the other, sep. into independent vesicles upon increasing the temperature or osmotic pressure; phase-contrast microscopy provides the details of the process.
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 33 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1988:607052 HCAPLUS
DOCUMENT NUMBER: 109:207052
TITLE: Fluidity and osmotic sensitivity changes of phospholipase A2-treated liposomes
AUTHOR(S): Kinjo, M.; Araiso, T.; Koyama, T.
CORPORATE SOURCE: Res. Inst. Appl. Electr., Hokkaido Univ., Sapporo, 060, Japan
SOURCE: Biorheology (1988), 25(3), 517-25
CODEN: BRHLAU; ISSN: 0006-355X
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 10 Dec 1988
AB Membrane fluidity and osmotic sensitivity were examined in DPPC liposomes treated with phospholipase A2 (PL.A2) in the presence of Ca2+ or Mg2+. The amount of liposome phospholipid hydrolyzed differed with the 2 ions. Embedded 1,6-diphenylhexatriene (DPH), a rod-like fluorescent probe, was used to determine membrane fluidity. Membrane fluidity decreased according to the degree of phospholipid hydrolyzation in liposomes by PL.A2. The reciprocal value of absorption at 450 nm was measured as the index of osmotic sensitivity of liposomes. Intact sonicated liposomes showed osmotic insensitivity. PL.A2-treated liposomes in which .apprx.40% of the total phospholipid was hydrolyzed showed osmotic sensitivity. No change in the membrane fluidity was obtained when PL.A2-treated liposomes were exposed to a hypertonic or hypotonic solution Apparently, the motion of the acyl-chain of phospholipids and free fatty acids was resistant in PL.A2-treated liposomes. The resistance may be due to a phase **separation** between **phospholipids** and free fatty acids. The pore for water permeation might be induced in the border between phase-separated domains in PL.A2-treated liposomes.

L76 ANSWER 34 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1985:2263 HCAPLUS
DOCUMENT NUMBER: 102:2263
TITLE: External field control of the distance between two bilayer lipid membranes
AUTHOR(S): Viryasov, S. N.
CORPORATE SOURCE: All-Union Res. Inst. Appl. Microbiol., Serpukhov, USSR
SOURCE: Biologicheskie Membrany (1984), 1(10), 1064-70
CODEN: BIMEE9; ISSN: 0233-4755
DOCUMENT TYPE: Journal
LANGUAGE: Russian
ED Entered STN: 12 Jan 1985
AB The application of external voltage to 2 conducting bilayer lipid membranes, brought into contact, provides a means for changing the distance between them over a 20-150 nm range. The electroosmotic pressure attains a value of ≤104 N/m2. The equations that quant. describe the phenomenon were derived based on theor. anal. Autoscillations of the membranes may take place under certain conditions. Systems responsible for active transport of ions might influence the contacting membranes in a similar way.

L76 ANSWER 35 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1984:420174 HCAPLUS
DOCUMENT NUMBER: 101:20174
TITLE: High-performance liquid chromatography of phospholipids using deuterated **solvents** for

infrared detection
AUTHOR(S): Chen, S. Shihua; Kou, Anne Y.
CORPORATE SOURCE: Dep. Pathol., Stanford Univ., Stanford, CA, 94305, USA
SOURCE: Journal of Chromatography (1984), 307(2), 261-9
CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 21 Jul 1984
AB IR detection of chromatog. effluents offers the advantage of direct online quantitation of lipid fractions. However, IR detection imposes limitations on the solvent systems that can be used for chromatog. MeOH and H2O, which are essential ingredients in the mobile phase for the successful chromatog. of phospholipids, do not have spectral transmittance windows in the IR region. Substituting deuterated MeOH and deuterium oxide for MeOH and H2O allowed IR detection because they had lower IR absorbance than their hydrogenated counterparts. A method that is suitable for the quant. anal. of phosphatidylethanolamine, phosphatidylcholine, and sphingomyelin in the tissue exts. was reported. The **lipid separation** was accomplished on a microparticulate silica gel column. Phosphatidylethanolamine and phosphatidylcholine were eluted isocratically with CHCl3-MeCN-MeOH-deuterium oxide (136:25:34:5.9) and detected at a wavelength of 5.75 μm. For the anal. of sphingomyelin, CHCl3-MeCN-deuterated MeOH-deuterium oxide (130:24:37.6:7.0) was used as the mobile phase, and the detection was at a wavelength of 6.15 μm.

L76 ANSWER 36 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1983:484551 HCAPLUS
DOCUMENT NUMBER: 99:84551
TITLE: Hyperfiltration through crosslinked monolayers. II
AUTHOR(S): Bauer, S.; Heckmann, K.; Six, L.; Strobl, C.; Bloecher, D.; Henkel, B.; Garbe, T.; Ring, K.
CORPORATE SOURCE: Inst. Phys. Makromol. Chem., Univ. Regensburg, Regensburg, 8400, Fed. Rep. Ger.
SOURCE: Desalination (1983), 46, 369-78
CODEN: DSLNAH; ISSN: 0011-9164
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 May 1984
AB A method is presented to produce a composite membrane consisting of a lipid monolayer and a polymer support. The lipids were isolated from the cell membrane of Thermoplasma acidophilum. Less complex model substances were also synthesized. The **separation** properties of such **lipid** films were studied by using liposomes. Poly(vinyl alc.) is used as support material.

L76 ANSWER 37 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1971:550547 HCAPLUS
DOCUMENT NUMBER: 75:150547
TITLE: Effect of a **solvent** on the degree of hydration of phosphatides in oil
AUTHOR(S): Mosyan, A. K.; Arutyunyan, N. S.; Arisheva, E. A.; Svechnik, A. N.
CORPORATE SOURCE: Krasnodar. Politekh. Inst., Krasnodar, USSR
SOURCE: Maslozhirovaya Promyshlennost (1971), 37(9), 15-18
CODEN: MZPYAE; ISSN: 0025-4649
DOCUMENT TYPE: Journal
LANGUAGE: Russian
ED Entered STN: 12 May 1984

AB A test tube procedure lasting up to 100 days was used to investigate visually the influence of the concentration of miscella, forming a layer on water or dilute NaOH, on the hydration of sunflower oil phospholipids. A quant. test based on 5-10 min of mixing with 2% water or NaOH solns. at 42-5° confirmed the visual observations. The hydration of phospholipids, negligible in dilute ligroine miscellas up to 50%, reached a maximum in 90% miscellas. Using instead of water a solution containing 15 g NaOH/l. increased the **separation** of **phospholipids** by 15-28%.

L76 ANSWER 38 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1967:114696 HCAPLUS
DOCUMENT NUMBER: 66:114696
TITLE: **Extraction** of lipids from raw beef lean by using various **solvent** systems
AUTHOR(S): Hagan, Susie N.; Murphy, Elizabeth Wilcox; Shelley, Lydia M.
CORPORATE SOURCE: Agr. Res. Ser., U.S Dep. of Agr., Beltsville, MD, USA
SOURCE: Journal - Association of Official Analytical Chemists (1967), 50(2), 250-5
CODEN: JANCA2; ISSN: 0004-5756
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 May 1984
AB CHCl3-MeOH extraction removes lipids from beef to yield percentages of total fat equal to or greater than those obtained by the A.O.A.C. method (Official Methods of Analysis A.O.A.C. 10th ed. 1965. sects. 23.003, 23.005 (CA 64, 1357h)). The ratio of phospholipid to triglyceride was always higher in the CHCl3-MeOH extracted samples. Six extraction method-solvent system combinations, 3 drying procedures, and 2 sample preparation methods were compared. The extracted **lipids** were **separated** by thin-layer chromatog. The ratio of phospholipid to triglyceride was calculated after the spectrophotometric determination of the ester groups present. Acid-hydrolysis-Rohrig gave the lowest yield of total lipid and of phospholipid. Sample preparation or drying methods caused few significant differences in the proportions of total solids and of total lipids in the beef cuts analyzed. 25 references.

L76 ANSWER 39 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1968:10089 HCAPLUS
DOCUMENT NUMBER: 68:10089
TITLE: Common **solvent** impurity resembling a tocopherol
AUTHOR(S): Bucke, Christopher
CORPORATE SOURCE: Univ. York, York, UK
SOURCE: Journal of Chromatography (1967), 31(1), 247-50
CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 May 1984
AB A blue fluorescent impurity originating in Me2CO and resembling menachromanol was found while investigating α-tocopherol (I) distribution in plant tissues. Broad bean leaves aged 15-30 days after harvesting before use were treated to **sep.** chloroplast fragments and mitochondria; **lipids** were extracted by the Bucke method (B. et al., CA 64: 8637h), and chlorophyll was estimated in 80% Me2CO. Some lipid exts. were chromatographed on neutral alumina deactivated with 5% water.

Other total lipid exts. and fractions from alumina columns were dissolved in cyclohexane and applied on 0.25-mm. thick silica gel on thin-layer plates. After development, the extract band in the same position as that of I was scraped off, eluted with spectroscopically pure EtOH, and estimated by uv anal. Preliminary results indicated a high I concentration in the cytoplasm.

However, each sample contained a substance with an intense blue fluorescence identical with a substance found in exts. of Pelargonium zonale and ivy which chromatographed with plastoquinone on silica gel G using 20% heptane in C6H6. This unknown substance was purified on silica gel G using a 2-dimensional technique; 40% heptane in C6H6 was used in the 1st direction, and 10% (iso-Pr)2O in light petroleum (b. 40-60°) was used in the 2nd direction. The unknown reduced Emmerie-Engel reagent, had an intense blue fluorescence, and produced a blue coloration with diazotized o-bianisidine. Oxidation with AuCl resulted in a change in the uv spectrum with a peak at 263 mμ. NaBH4 did not change the spectrum, indicating that the unknown was not a quinone or a chromanol. The same unknown was present in large amts. in reagent grade Me2CO and in smaller amts. in anal. grade Me2CO. Treatment with activated C followed by distillation removed the impurity, and resulted in a different I distribution in bean leaves. I is associated with the chlorophyll and is absent in the supernatant.

L76 ANSWER 40 OF 64 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1963:60764 HCAPLUS
DOCUMENT NUMBER: 58:60764
ORIGINAL REFERENCE NO.: 58:10432c-d
TITLE: Loss of ribonucleic acid (RNA) into lipid **solvents** after acid precipitation
AUTHOR(S): Hallinan, T.; Fleck, A.; Munro, H. N.
CORPORATE SOURCE: Univ. Glasgow, UK
SOURCE: Biochimica et Biophysica Acta (1963), 68, 131-3
CODEN: BBACAQ; ISSN: 0006-3002
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 22 Apr 2001
AB The estimation of RNA was studied, particularly the effect of concentration of CCl3CO2H and HClO4 in relation to the action of lipid solvents on RNA recoveries from liver. Measurements were made of RNA recovered when 10% rat-liver homogenates were precipitated and washed with different concns. of HClO4, and when they were precipitated, washed with different concns. of CCl3CO2H and then extracted with 95% EtOH. Although low concns. of HClO4 (0.2N) appeared to be suitable for precipitating RNA without danger of acid hydrolysis, considerable losses of RNA occurred when the precipitated tissue was then transferred to lipid solvent. It was recommended that tissue should be precipitated with 0.2N HClO4 and RNA estimated without the use of lipid solvents.

L76 ANSWER 41 OF 64 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:442566 BIOSIS
DOCUMENT NUMBER: PREV200400448626
TITLE: Method of **extracting lipids** from marine and aquatic **animal tissues.**
AUTHOR(S): Beaudoin, Adrien [Inventor, Reprint Author]; Martin, Genevieve [Inventor]

CORPORATE SOURCE: Rock Forest, Canada
ASSIGNEE: Universite de Sherbrooke, Canada
PATENT INFORMATION: US 6800299 20041005
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Oct 5 2004) Vol. 1287, No. 1. http://www.uspto.gov/web/menu/patdata.html. e-file. ISSN: 0098-1133 (ISSN print).
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 17 Nov 2004
Last Updated on STN: 17 Nov 2004
ED Entered STN: 17 Nov 2004
Last Updated on STN: 17 Nov 2004
AB Provided herein is a method for extracting lipid fractions from marine and aquatic animal material by acetone extraction. The resulting non-soluble and particulate fraction is preferably subjected to an additional **solvent** extraction with an alcohol, preferably ethanol, isopropanol or t-butanol or an ester of acetic acid, preferably ethyl acetate to achieve extraction of the remaining soluble lipid fraction from the marine and aquatic animal material. The remaining non-soluble particulate contents is also recovered since it is enriched in proteins and contains a useful amount of active enzymes. Also provided herein is a krill extract.

L76 ANSWER 42 OF 64 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:405183 BIOSIS
DOCUMENT NUMBER: PREV200400408601
TITLE: Ethyl acetate/ethyl alcohol mixtures as an alternative to Folch reagent for **extracting** animal **lipids.**
AUTHOR(S): Lin, Jen-Horng; Liu, Li-Yun; Yang, Ming-Hua; Lee, Min-Hsiung [Reprint Author]
CORPORATE SOURCE: Grad Inst Agr Chem, Natl Taiwan Univ, 1,Sec 2,Roosevelt Rd, Taipei, 10617, Taiwan
mhlee@ccms.ntu.edu.tw
SOURCE: Journal of Agricultural and Food Chemistry, (August 11 2004) Vol. 52, No. 16, pp. 4984-4986. print. CODEN: JAFCAU. ISSN: 0021-8561.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 20 Oct 2004
Last Updated on STN: 20 Oct 2004
ED Entered STN: 20 Oct 2004
Last Updated on STN: 20 Oct 2004
AB The lipids of fresh egg yolk, boiled yolk, yolk powder, and raw **animal tissues** including pork loin, belly pork, and pork fat were extracted with the mixed **solvents** composed of ethyl acetate (EtOAc) and ethyl alcohol (EtOH) at 2:1 and 1:1 volume ratios, and the results were compared with those obtained with Folch reagent, that is, a mixture of chloroform and methyl alcohol (2:1, v/v). Extraction yields, lipid profiles, and fatty acid compositions were determined by weighing, TLC-FID, and GC, respectively. Data of the extracts obtained with the mixtures of EtOAc and EtOH were not significantly different from those obtained with Folch reagent, implying that the mixed **solvent** composed of EtOAc and EtOH (1:1 to 2:1, v/v) may replace Folch reagent, which is considered to be toxic and mutagenetic due to its component of CHCl3, for lipid extraction.

L76 ANSWER 43 OF 64 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2003:116201 BIOSIS
DOCUMENT NUMBER: PREV200300116201
TITLE: 31P NMR quantification and monophasic **solvent** purification of human and bovine lens phospholipids.
AUTHOR(S): Byrdwell, William C.; Sato, Hidetoshi; Schwarz, Arne K.; Borchman, Douglas [Reprint Author]; Yappert, M. C.; Tang, Daxin
CORPORATE SOURCE: Department of Ophthalmology and Visual Sciences, University of Louisville, 301 E. Muhammad Ali Blvd., Louisville, KY, 40202, USA
borchman@louisville.edu
SOURCE: Lipids, (November 2002) Vol. 37, No. 11, pp. 1087-1092. print.
CODEN: LPDSAP. ISSN: 0024-4201.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 26 Feb 2003
Last Updated on STN: 26 Feb 2003
ED Entered STN: 26 Feb 2003
Last Updated on STN: 26 Feb 2003
AB Most lipid extraction procedures (Folch, J., Lees, M., and Sloane-Stanley, G.H. (1957) A Simple Method for the **Isolation** and **Purification** of Total **Lipids** from **Animal Tissues**, J. Biol. Chemical 226, 497-509; Bligh, E.G., and Dyer, W.J. (1959) A Rapid Method of Total Lipid Extraction and Purification, Can. J. Biochem. Physiol. 37, 911-917) employ biphasic **solvent** mixtures designed to dissolve the lipids in an organic phase and remove impurities in an aqueous phase. However, when applying these protocols to biological matrices such as that of the ocular lens, the formation of an emulsion layer between the organic and aqueous phases causes poor reproducibility in extraction yields and gives only a small amount of the lipid-containing chloroform phase. In this study, we quantified phospholipids at each step of the Folch et al. extraction protocol and compared the yield of human and bovine lens phospholipids obtained by the Folch-based approach and a novel monophasic methanol extraction method designed to circumvent the problems associated with biphasic extraction protocols. A monophasic methanol extraction coupled with 31P NMR spectroscopy was found to be the simplest, quickest, and most effective method for quantifying the phospholipid content of the lens.

L76 ANSWER 44 OF 64 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2001:447203 BIOSIS
DOCUMENT NUMBER: PREV200100447203
TITLE: **Separation** of plant membrane **lipids** by multiple solid-phase **extraction.**
AUTHOR(S): Rizov, Ivelin [Reprint author]; Doulis, Andreas
CORPORATE SOURCE: AgroBioInstitute, 2232, Ksotinbrod, 2, Bulgaria
ivrizov@hotmail.com
SOURCE: Journal of Chromatography A, (13 July, 2001) Vol. 922, No. 1-2, pp. 347-354. print.
CODEN: JOCRAM. ISSN: 0021-9673.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 19 Sep 2001
Last Updated on STN: 22 Feb 2002
ED Entered STN: 19 Sep 2001

Last Updated on STN: 22 Feb 2002

AB Plant membrane **lipids** were **separated** by multiple solid-phase extraction (SPE) in a single run. Elution was performed continuously through the modulated stationary phase employing only non-aqueous **solvent** systems. At the different stages of the glycerolipid separation the SPE manifold combined aminopropyl, aminopropyl/silica gel and silica gel/aminopropyl weak anion exchanger columns. The glycerolipid extract of pigment-containing **plant tissues** was cleared from the pigments onto the aminopropyl column. The aminopropyl column with the glycerolipid extract was then connected to a silica gel column from which monogalactosyldiacyglycerol, phosphatidylethanolamine, phosphatidylglycerol and digalactosyldiacylglycerol were eluted as individual fractions. The elution was performed under polarity, pH and temperature gradient conditions. To continue the separation, the aminopropyl column was discarded and the silica gel column containing the remaining glycerolipid extract was connected to an aminopropyl anion exchanger column. Individual fractions of sulfoquinovosyldiacylglycerol, phosphatidylcholine and phosphatidylinositol were now eluted. The separation process was supported by ammonium counter ions and by the polarity gradient of the elution systems used. The membrane **lipids** were **isolated** from pigment-containing (rice and maize leaves and rice leafy stems) and pigment-free (rice roots) tissues. The repeatability for a standard glycerolipid mixture was 2-6% (n=7), and for rice leaf lipid extracts, 3-7% (n=5). Glycerolipid recovery was 87-95%.

L76 ANSWER 45 OF 64 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 1998:115681 BIOSIS
DOCUMENT NUMBER: PREV199800115681
TITLE: Accelerated **solvent extraction** of **lipids** for determining the fatty acid composition of biological material.
AUTHOR(S): Schaefer, Klaus [Reprint author]
CORPORATE SOURCE: Inst. fuer Tierenaehrung de Freien Univ. Berlin, Bruemmerstr 34, 14195 Berlin, Germany
SOURCE: Analytica Chimica Acta, (Jan. 20, 1998) Vol. 358, No. 1, pp. 69-77. print.
CODEN: ACACAM. ISSN: 0003-2670.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 5 Mar 1998
Last Updated on STN: 5 Mar 1998

ED Entered STN: 5 Mar 1998
Last Updated on STN: 5 Mar 1998

AB Methods currently used for the quantitative determination of total lipids and fatty acid composition in plant and **animal tissues** require **solvent** extraction. An accelerated **solvent** -extraction (ASE) system and a modified Folch procedure were compared in their ability to **extract lipids** from cereal, egg yolk and chicken breast muscle samples. Fatty acid contents and compositions of **extracted lipids** were determined by gas-liquid chromatography. Results varied with different extraction conditions. The fatty acid contents of cereal and yolk **lipids extracted** by ASE were highest when using isopropanol-hexane (2:3, v/v), however, the **extraction** of muscle **lipids** resulted in higher fatty acid contents when chloroform-methanol (2:1, v/v) is used. Results indicate that ASE is a promising lipid-extraction system for the entire range of plant and **animal tissues**.

L76 ANSWER 46 OF 64 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1997:41809 BIOSIS
DOCUMENT NUMBER: PREV199799333797
TITLE: Isolation and fatty acid analysis of neutral and **polar** lipids of the food bacterium Listeria monocytogenes.
AUTHOR(S): Mastronicolis, Sofia K. [Reprint author]; German, J. Bruce; Smith, Gary M.
CORPORATE SOURCE: Dep. Food Sci. Technol., Univ. California, Davis, CA 95616, USA
SOURCE: Food Chemistry, (1996) Vol. 57, No. 3, pp. 451-456.
CODEN: FOCHDJ. ISSN: 0308-8146.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 28 Jan 1997
Last Updated on STN: 28 Jan 1997
ED Entered STN: 28 Jan 1997
Last Updated on STN: 28 Jan 1997
AB Listeria monocytogenes is a Gram-positive bacterium that causes meningitis, septicemia and death in humans. Found in low-acid cheeses, vegetables and meat, L. monocytogenes is resistant to **osmotic** and chill stress. Food handling practices that suppress microbial competitors can therefore promote its growth. In response to hyperosmotic or chill stress, L. monocytogenes accumulates the potent protectant glycine betaine from the medium, which decreases the lag time and increases the growth rate of the organism. The molecular basis for activation of glycine betaine transport by chill (7 degree C), despite the expected **membrane** lipid phase transition, may reside in the lipid composition. The present research identified the lipids of L. monocytogenes. **Extraction** of total **lipids** yielded 7 +- 1 mg ml-1 wet cells, with a 5-6% phosphorus content. Polar lipids represented 64% of total lipids. There was a clear difference in the relative complexity of the fatty acids: neutral lipids were more varied and unsaturated fatty acids represented 19% of the total. Polar lipid fatty acids were primarily 15:anteiso (50%) and 17:anteiso (25%).

L76 ANSWER 47 OF 64 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1995:351849 BIOSIS
DOCUMENT NUMBER: PREV199598366149
TITLE: One-Step Extraction and Concentration of Pigments and Acyl Lipids by sec-Butanol from in Vitro and in Vivo Samples.
AUTHOR(S): Martinson, Tracey A.; Plumley, F. Gerald
CORPORATE SOURCE: Inst. Marine Sci., Univ. Alaska Fairbanks, Fairbanks, AK 99775, USA
SOURCE: Analytical Biochemistry, (1995) Vol. 228, No. 1, pp. 123-130.
CODEN: ANBCA2. ISSN: 0003-2697.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 10 Aug 1995
Last Updated on STN: 13 Sep 1995
ED Entered STN: 10 Aug 1995
Last Updated on STN: 13 Sep 1995
AB Photosynthetic pigments and acyl **lipids** were simultaneously **extracted** and concentrated by sec-butanol. Pigments extracted with sec-butanol were indistinguishable from those extracted using acetone

as determined by quantitative and qualitative HPLC. Use of sec-butanol has several advantages over conventional extraction **solvents**: (1) pigments are extracted directly from polyacrylamide gel slices without an elution step; (2) pigments in dilute, isolated pigment-protein complexes are extracted and concentrated without first concentrating the sample; (3) when necessary, the concentration factor is readily increased by addition of water; (4) sec-butanol **extracts** acyl **lipids** and vitamin K-1 as effectively, but much quicker, than chloroform:methanol; (5) sec-butanol rapidly extracts and concentrates pigments from thylakoids of all plant species tested and even directly from many algal/higher **plant cells**, facilitating analysis of pigment biosynthetic pathways using radioactive substrates; and (6) pigments are stable in sec-butanol for several days at room temperature in the dark or for many weeks if stored at -20 degree C in darkness. Finally, sec-butanol is preferable to ether for concentrating pigments extracted with acetone.

L76 ANSWER 48 OF 64 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1993:279248 BIOSIS
DOCUMENT NUMBER: PREV199396009473
TITLE: Occurrence of prenylated proteins in **plant cells**.
AUTHOR(S): Swiezewska, E. [Reprint author]; Thelin, A.; Dallner, G.; Andersson, B.; Ernster, L.
CORPORATE SOURCE: Inst. Biochem. Biophys., Polish Acad. Sci., 02-532 Warsaw, Poland
SOURCE: Biochemical and Biophysical Research Communications, (1993) Vol. 192, No. 1, pp. 161-166.
CODEN: BBRCA9. ISSN: 0006-291X.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Jun 1993
Last Updated on STN: 8 Aug 1993
ED Entered STN: 9 Jun 1993
Last Updated on STN: 8 Aug 1993
AB In this paper evidence is presented for the occurrence of prenylated proteins in plants. When spinach leaves were incubated in the presence of (3H)mevalonate non-**extractable lipids** were found in the protein fraction after extraction with organic **solvents**. Alkaline hydrolysis liberated phytol, polyprenyl phosphates-11-15 and also, in contrast to **animal cells**, polyprenols-11-15. Complete removal of farnesol and geranylgeraniol required the cleavage of thioether linkages by iodomethane. The results indicate that several polyisiprenoid lipids in **plant cells** are covalently bound to proteins. So far a protein fraction dominated by one or more proteins in the 23 kDa region has been identified.

L76 ANSWER 49 OF 64 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1986:374660 BIOSIS
DOCUMENT NUMBER: PREV198682069636; BA82:69636
TITLE: A COMPARISON OF EXTRACTION METHODS FOR THE ISOLATION OF PHOSPHOLIPIDS FROM BIOLOGICAL SOURCES.
AUTHOR(S): KOLAROVIC L [Reprint author]; FOURNIER N C
CORPORATE SOURCE: NESTLE RES DEP, NESTEC LTD, CH-1800 VEVEY, SWITZERLAND
SOURCE: Analytical Biochemistry, (1986) Vol. 156, No. 1, pp. 244-250.
CODEN: ANBCA2. ISSN: 0003-2697.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 20 Sep 1986
Last Updated on STN: 20 Sep 1986
ED Entered STN: 20 Sep 1986
Last Updated on STN: 20 Sep 1986
AB Four classical methods, as well as a method presented in this paper, were compared as to their efficiency in extracting phospholipids from **animal tissue**. After the **extractions**, total **lipids** were **separated** quantitatively by DEAE-Sephadex chromatography into their acidic and nonacidic fractions. The two fractiosn were then further analyzed by gradient saturation high-performance thin-layer chromatography (HPTLC) combined with scanning photodensitometry after coloration with copper acetate. Of the five methods compared, the present and Christiansen's methods based upon single-phase **solvent** systems proved to be more efficient than biphasic extraction procedures. The undesirable discriminatory effect exhibited by biphasic **solvent** systems toward acidic phospholipids which were partly retained in the aqueous phase was confirmed by statistical evaluation of the HPTLC results. Total chromogenic response of acidic phospholipids extracted using biphasic **solvent** systems was shown to be lower by 10-35% in comparison to the single-phase method of Christiansen. The suitability of the present method for studies involving phospholipid synthesis was confirmed by monitoring the elimination of water-soluble compounds from the single-phase extracts using a classical phospholipid precursor, 2-[3H]glycerol-3-phosphate. The labeled compound was eliminated (99.3-100%) from the single-phase postcentrifugation supernatant, followed by DEAE-Sephadex chromatography.

L76 ANSWER 50 OF 64 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1985:288968 BIOSIS
DOCUMENT NUMBER: PREV198579068964; BA79:68964
TITLE: ESTIMATION OF ACYLDIHYDROXYACETONE PHOSPHATE AND LYSOPHOSPHATIDATE IN **ANIMAL TISSUES**.
AUTHOR(S): DAS A K [Reprint author]; HAJRA A K
CORPORATE SOURCE: NEUROSCIENCE LABORATORY, UNIVERSITY OF MICHIGAN, 1103 E HURON, ANN ARBOR, MICH 48109, USA
SOURCE: Biochimica et Biophysica Acta, (1984) Vol. 796, No. 2, pp. 178-189.
CODEN: BBACAQ. ISSN: 0006-3002.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB Chemical and enzymatic methods were developed to measure small quantities (10-8-10-10 mol) of acyldihydroxyacetone phosphate in **animal tissues**. **Lipids extracted** from tissue samples with acidic CHCl3/methanol were subjected to **solvent** partitioning at 2 different pH values for partial purification of this keto-lipid from other lipids. The lipid was then estimated radiometrically either by chemical reduction with NaB3H4 or by enzymatic reduction with [4B-3H]NADPH using a partially purified acyldihydroxyacetone-phosphate reductase (EC 1.1.1.101). TLC revealed the presence of a number of 3H-labeled lipids in the NaB3H4-reduced product and further purification of the product was necessary to estimate the amount of acyl[2-3H]glycerol 3-phosphate formed. The enzymatic reduction was very specific for acyl/alkyldihydroxyacetone phosphate. The amounts

(nmol/g) of these keto-lipids estimated in different tissues by the enzymatic method were 10.06 ± 0.64 (guinea pig liver), 4.3 ± 0.15 (rat liver), 2.1 (rat testis), 1.5 (rat kidney) and 1.2 (rat brain). Monoacylglycerol 3-phosphate, i.e., lysophosphatidic acid, which was co-purified with acyldihydroxyacetone phosphate, was found to be present in relatively larger amounts in tissues. The amounts (nmol/g) of this lipid, estimated by enzymatically measuring the amounts of sn-glycerol 3-phosphate released after alkaline methanolysis of the partially purified lipid extracts, were 143 (guinea pig liver), 58 (rat liver), 53 (rat kidney) and 92 (rat brain). Stearic acid (18:0) was found to be the major (65%) fatty acid present in the lysophosphatidate purified from guinea pig liver.

L76 ANSWER 51 OF 64 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1979:191214 BIOSIS
DOCUMENT NUMBER: PREV197967071214; BA67:71214
TITLE: QUANTITATIVE DETERMINATION OF MELANIN.
AUTHOR(S): BOROVANSKY J [Reprint author]
CORPORATE SOURCE: DEP MED BIOCHEM, CHARLES UNIV, U NEMOCNICE 5, 128 53 PRAGUE 2, CZECH
SOURCE: Mikrochimica Acta, (1978) Vol. 2, No. 5-6, pp. 423-430. CODEN: MIACAQ. ISSN: 0026-3672.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB The resistance of melanin to acid attack is used in a new gravimetric procedure for the determination of melanin in **animal tissues** [human and dog hair, bovine iris, Sepia officinalis ink, and human, Harding-Passey mouse, Bomirsky hamster and horse melanomas]. **Lipids** are removed by **solvent extraction** after acid hydrolysis of the samples.

L76 ANSWER 52 OF 64 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1978:124450 BIOSIS
DOCUMENT NUMBER: PREV197865011450; BA65:11450
TITLE: COMPARISON OF METHODS FOR THE **EXTRACTION** OF PLANT **LIPIDS**.
AUTHOR(S): FISHWICK M J [Reprint author]; WRIGHT A J
CORPORATE SOURCE: AGRIC RES COUNC, FOOD RES INST, COLNEY LANE, NORWICH NR4 7UA, NORFOLK, ENGL, UK
SOURCE: Phytochemistry (Oxford), (1977) Vol. 16, No. 10, pp. 1507-1510. CODEN: PYTCAS. ISSN: 0031-9422.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB The ability of a number of different **solvent** systems to extract lipid from a range of **plant tissues** was compared by measurement of phospholipid, glycolipid, sterol lipid and total acyl lipid content. A chloroform-methanol extraction method based upon the principles of Bligh and Dyer was considered to be the most efficient system for use with the majority of **plant tissues**. Cereal seeds were anomalous in that water saturated N-butanol was the preferred **solvent** system due to its superior ability to extract bound lysophospholipids present in large amounts in the endosperm portion of the tissue.

L76 ANSWER 53 OF 64 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2005139012 EMBASE

TITLE: Screening and sequencing of complex sialylated and sulfated glycosphingolipid mixtures by negative ion electrospray Fourier transform ion cyclotron resonance mass spectrometry.

AUTHOR: Vukelic Z.; Zamfir A.D.; Bindila L.; Froesch M.; Peter-Katalinic J.; Usuki S.; Yu R.K.

CORPORATE SOURCE: Dr. J. Peter-Katalinic, Laboratory for Biomedical Analysis, Inst. for Med. Phys. and Biophysics, University of Munster, Robert Koch Strasse 31, D-48149 Munster, Germany. jkp@uni-muenster.de

SOURCE: Journal of the American Society for Mass Spectrometry, (2005) Vol. 16, No. 4, pp. 571-580.
Refs: 35
ISSN: 1044-0305 CODEN: JAMSEF

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 029 Clinical Biochemistry

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 20050421
Last Updated on STN: 20050421

ED Entered STN: 20050421
Last Updated on STN: 20050421

AB A protocol for negative ion nanoelectrospray ionization Fourier transform ion cyclotron resonance mass spectrometry (-)nanoESI-FTICR MS, investigation of complex biological mixtures consisting of sialylated or sulfated glycosphingolipids (GSL) expressing high heterogeneity in the ceramide portion is described. Different instrumental and solvent conditions were explored and optimized to promote efficient ionization, reduce the in-source fragmentation and consequently enhance the detection of intact molecular species from complex mixtures. Using the novel optimized (-)nanoESI-FTICR MS protocol, a reliable and detailed compositional fingerprint of the polysialylated **ganglioside** mixture **isolated** from human brain was obtained. Sustained off-resonance irradiation collision-induced dissociation mass spectrometry (SORI-CID MS(2)) was introduced for the first time for structural elucidation of polysialylated gangliosides. Under well-defined conditions, an informative fragmentation pattern of the trisialylated ganglioside GT1 was obtained. The compositional mapping of a complex mixture of sulfated glucuronic acid containing neolacto-series GSLs extracted from bovine Cauda equina provided hard evidence upon previously described components and new structures not identified before by any other analytical method. Negative ion nanoESI-FTICR MS at 9.4 T is shown here to represent a valuable method in glycolipidomics, allowing a high resolution and mass accuracy detection of major and minor GSL glycoforms and identification of known and novel biologically relevant structures. .COPYRGT. 2005 American Society for Mass Spectrometry.

L76 ANSWER 54 OF 64 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2004109607 EMBASE

TITLE: Monoacylglycerols: Glycolipid biosurfactants produced by a thermotolerant yeast, Candida ishiwadae.

AUTHOR: Thanomsub B.; Watcharachaipong T.; Chotelersak K.; Arunrattiyakorn P.; Nitoda T.; Kanzaki H.

CORPORATE SOURCE: B. Thanomsub, Department of Microbiology, Faculty of

Medicine, Srinakharinwirot University, Bangkok 10110, Thailand. benjamat@swu.ac.th
SOURCE: Journal of Applied Microbiology, (2004) Vol. 96, No. 3, pp. 588-592.
Refs: 8
ISSN: 1364-5072 CODEN: JAMIFK
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20040412
Last Updated on STN: 20040412
ED Entered STN: 20040412
Last Updated on STN: 20040412
AB Aims: To isolate and characterize biosurfactants produced by a thermotolerant yeast isolated in Thailand. Materials and Results: Yeast strains isolated from plant material in Thailand were first screened for the ability to produce lipase and biosurfactant. A strain Y12, identified as Candida ishiwadae by physiological tests, survived at 45°C and produced relatively large amounts of biosurfactants. From the culture filtrate of this strain, two **glycolipid** biosurfactants, a and b, were **purified** by solvent fractionation, silica gel and ODS column chromatographies. Compounds a and b were determined to be monoacylglycerols; 1-linoleylglycerol and 1-oleylglycerol, respectively. Both compounds exhibited higher surfactant activities tested by the drop collapse test than several artificial surfactants such as sodium dodecyl sulphate. Conclusions: Glycolipid biosurfactants produced by a thermotolerant yeast, C. ishiwadae were characterized to be monoacylglycerols which exhibited high surfactant activities. Significance and Impact of the Study: A thermotolerant yeast strain, C. ishiwadae, could be a potential candidate for producing monoacylglycerols which are useful in industrial applications.

L76 ANSWER 55 OF 64 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2004204433 EMBASE
TITLE: Optimisation of the **separation** of four major neutral **glycosphingolipids**: Application to a rapid and simple detection of urinary globotriaosylceramide in Fabry disease.
AUTHOR: Roy S.; Gaudin K.; Germain D.P.; Baillet A.; Prognon P.; Chaminade P.
CORPORATE SOURCE: P. Chaminade, Grp. Chim. Analytique Sud de Paris, EA 3343, Faculte de Pharmacie, 5 rue Jean-Baptiste Clement, 92296 Chatenay-Malabry, Cedex, France. pierre.chaminade@cep.u-psud.fr
SOURCE: Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, (15 Jun 2004) Vol. 805, No. 2, pp. 331-337.
Refs: 35
ISSN: 1570-0232 CODEN: JCBAAI
PUBLISHER IDENT.: S 1570-0232(04)00278-8
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20040604

Last Updated on STN: 20040604
ED Entered STN: 20040604
Last Updated on STN: 20040604
AB A simple method for the **separation** of the four major neutral **glycosphingolipids**, present in all human tissue, was developed. This gradient normal phase-HPLC method utilises a polyvinyl alcohol bonded stationary phase and an evaporative light-scattering detection (ELSD). Screening pure solvents in a binary gradient elution mode allowed, in a first step, to assess the behaviour of the studied solutes and to select the solvents for further mobile phase optimisation. The proportion of the remaining solvents was defined to reach a maximal resolution. The reduction of the analysis time and the enhancement of the signal were obtained by optimising the gradient slope and the flow-rate. Optimal levels of triethylamine and formic acid (TEA-FA) for the enhancement of the evaporative light scattering detector response were established at 0.1% (v/v). Thus, the optimal conditions for the **separation** of the four **glycosphingolipids** was obtained with a gradient elution from a 100% chloroform to a 100% acetone:methanol (90:10 (v/v)) mobile phase at 0.2 ml min(-1), using a 10% min(-1) gradient slope. Finally, this method was applied to detect the excess of one of the neutral sphingolipids, namely globotriaosylceramide (Gb(3)) in the urine of patients affected with Fabry disease. A liquid-liquid extraction of the sediments obtained from an aliquot of only ten ml of urine proved sufficient to detect the excess of Gb(3) present in both hemizygote and heterozygote patients. In all, the ability of our method to detect abnormal amounts of Gb(3) in urinary sediments could allow the diagnosis of weakly symptomatic Fabry patients in large screening programs.

L76 ANSWER 56 OF 64 EMBASE
on STN
ACCESSION NUMBER: 2003170488 EMBASE
TITLE: **Separation** of phospholipids and **glycolipids** using analytical toroidal-coil counter-current chromatography. II. Comparison of the hydrophobicity between Mycoplasma fermentans and human-brain lipids.
AUTHOR: Matsuda S.; Matsuda K.; Ito Y.
CORPORATE SOURCE: K. Matsuda, Pharmacology Division, Natl. Cancer Ctr. Research Institute, 5-1-1, Tsukiji, Chuo-ku, Tokyo 104-0045, United States. kmatsuda@gan2.res.ncc.go.jp
SOURCE: Journal of Liquid Chromatography and Related Technologies, (2003) Vol. 26, No. 7, pp. 1135-1147.
Refs: 29
ISSN: 1082-6076 CODEN: JLCTFC
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20030509
Last Updated on STN: 20030509
ED Entered STN: 20030509
Last Updated on STN: 20030509
AB Previously, we reported the successful separation of human-brain lipids by toroidal-coil countercurrent chromatography (TC-CCC) avoiding emulsification and optimizing the solvent systems. In this study, the TC-CCC technique was applied for the analysis of phosphocholine-containing glycoglycerolipids (GGPL-I and GGPL-III) of Mycoplasma fermentans, which

is thought to be one of the causative microorganisms of rheumatoid arthritis (RA). Neutral lipids of M. fermentans were separated and their elution profile compared with that of human-brain lipids using a hexane:ethyl acetate: ethanol: 0.1% TFA (5:5:5:4, v/v/v/v) solvent system. In this solvent system, the hydrophobicities of GGPL-III and GGPL-I were similar to those of lysophosphatidylcholine and sphingomyelin (SPM II), respectively. Glycoglycerolipid III was isolated, and further separated into at least two molecular species, using an optimized solvent system composed of hexane:ethyl acetate: ethanol: 0.1% TFA (3: 5: 3: 4, v/v/v/v). The TC-CCC technique is a powerful tool for the separation of lipids of microorganisms, and more importantly, it may become a useful tool for the analysis of a host-pathogen interaction or, in other words, a lipid-protein interaction at lipid microdomains.

L76 ANSWER 57 OF 64 EMBASE
on STN

ACCESSION NUMBER: 2002456519 EMBASE
TITLE: Analysis of glycolipids from black cumin (Nigella sativa L.), coriander (Coriandrum sativum L.) and niger (Guizotia abyssinica Cass.) oilseeds.
AUTHOR: Ramadan M.F.; Morsel J.-T.
CORPORATE SOURCE: M.F. Ramadan, Institute of Food Chemistry, Tech. University of Berlin, TIB 4/3-1, Gustav-Meyer-Allee 25, D-13355 Berlin, Germany. hassanienmohamed@hotmail.com
SOURCE: Food Chemistry, (2003) Vol. 80, No. 2, pp. 197-204.
Refs: 29
ISSN: 0308-8146 CODEN: FOCHDJ
PUBLISHER IDENT.: S 0308-8146(02)00254-6
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 027 Biophysics, Bioengineering and Medical Instrumentation
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20030103
Last Updated on STN: 20030103

ED Entered STN: 20030103
Last Updated on STN: 20030103

AB Edible plant glycolipids (GL) are anticipated to play a role in human nutrition. Total **glycolipids** (TGL) were **separated** from black cumin (Nigella sativa L.), coriander (Coriandrum sativum L.) and niger (Guizotia abyssinica Cass.) seed oils by silica gel chromatography. Different GL subclasses were then identified and separated using high-performance liquid chromatography with ultraviolet adsorption (HPLC/UV). Separation was accomplished using Zorbax-Sil (5 μm) column with an isocratic elution by mixed solvents of isooctane/2-propanol (1:1, v/v) and detection at 206 nm. Methods are described for the analysis of GL constituents, sugar and sterols (ST), using gas-liquid chromatography equipped with flame ionization detector (GLC/FID). A relatively high level of TGL was found in all studied oilseeds. Six GL subclasses were detected in black cumin seed oil, wherein diglucosyldiacylglycerol (DGD) was the prevalent component, followed by glucocerebroside (CER). Among the TGL from coriander and niger oilseeds, acylated steryl glucoside (ASG), steryl glucoside (SG) and CER were detected. The fatty acid profiles of GL fractions from black cumin and niger seed oils was generally similar, wherein linoleic acid C18:2n-6 was the dominating fatty acid, followed by oleic acid C18:1n-9. Petroselinic acid C18:1n-12 was the fatty acid marker in GL subclasses

obtained from coriander seed oil, followed by linoleic acid C18:2n-6. Four ST moieties were identified in black cumin and coriander SG and ASG fractions, while the fractions from niger oilseeds showed only three distinct ST peaks. As component sugar, glucose was the only sugar detected in all samples. .COPYRGT. 2002 Elsevier Science Ltd. All rights reserved.

L76 ANSWER 58 OF 64 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2001097864 EMBASE
TITLE: Chromatographic resolution and quantitative assay of CNS tissue sphingoids and sphingolipids.
AUTHOR: Dasgupta S.; Hogan E.L.
CORPORATE SOURCE: S. Dasgupta, Department of Neurology, Medical University of South Carolina, Charleston, SC 29425, United States. dasgupta@musc.edu
SOURCE: Journal of Lipid Research, (2001) Vol. 42, No. 2, pp. 301-308.
Refs: 52
ISSN: 0022-2275 CODEN: JLPRAW
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 008 Neurology and Neurosurgery
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20010329
Last Updated on STN: 20010329
ED Entered STN: 20010329
Last Updated on STN: 20010329
AB Quantitative separation of ceramide, sphingoids (dihydrosphingosine, sphingosine, psychosine), and glycosphingolipids as individual fractions was achieved with silicic acid, Dowex column chromatography, and specific solvent mixtures that have not been previously described. Purified ceramide, resolved as a single band, was assayed by thin-layer chromatography (TLC) followed by gas chromatography (GC) and high performance liquid chromatography (HPLC). Sphingoids, purified by Dowex, were assayed by GC and HPLC without mild alkaline hydrolysis, which reduces the yield by interfering with the free amino group of psychosine and dihydrosphingosine. Several less polar (than cerebroside) alkali-/acid-labile glycosphingolipids that elute with galactosylceramide were also identified. Neutral and acidic **glycosphingolipids**, quantitatively recovered and **purified** to homogeneity, were resolved by TLC. We used these techniques to determine sphingolipids and sphingoids of vertebrate central nervous system (CNS) tissue, using as little as 30-50 mg (wet weight) of tissue. In addition, phosphatidylcholine and sphingomyelin, relevant to ceramide metabolism, were quantitatively recovered in pure form and resolved by TLC. This method, used to study CNS sphingolipid content, may well be applicable to determine the sphingolipid composition of other tissues and cell culture, but further experiments are necessary to ascertain this.

L76 ANSWER 59 OF 64 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 1998095095 EMBASE
TITLE: **Isolation** of less polar alkali-labile **glycolipids** of human brain by high-speed countercurrent chromatography.
AUTHOR: Matsuda K.; Ma Y.; Barghout V.; Ito Y.; Chatterjee S.

CORPORATE SOURCE: S. Chatterjee, Department of Pediatrics, School of Medicine, Johns Hopkins University, 600 N Wolfe Street, Baltimore, MD 21287-3654, United States
SOURCE: Journal of Liquid Chromatography and Related Technologies, (1998) Vol. 21, No. 1-2, pp. 103-110.
Refs: 16
ISSN: 1082-6076 CODEN: JLCTFC
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 027 Biophysics, Bioengineering and Medical Instrumentation
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19980514
Last Updated on STN: 19980514
ED Entered STN: 19980514
Last Updated on STN: 19980514
AB High-speed countercurrent chromatography (HSCCC), a liquid-liquid partition system, was used for the final **purification** of less polar alkali- labile **glycolipids** (ALGLs) of human brain. It has been reported that vertebrate brain contains ALGLs consisting of ester cerebroside and monoglucosyldiacylglycerol. ALGLs have alkali-labile ester bonds and are shown to be less polar than cerebroside. First, ALGLs (ALGL-I, II, III and IV) were extracted and isolated by repeated silica gel column chromatography. Then, the mixture of ALGLs was subjected to the HSCCC in which a solvent system, hexane/ethanol/water (5:4:1, by volume), was used with the lower phase mobile. ALGL-IV and -III were clearly separated. ALGL-IV, which was resolved as a single band on high performance thin-layer chromatography, was further separated into several components (ALGL-IVa, b, c, d and e). This is the first application of HSCCC for the separation of human brain ALGLs. The availability of purified ALGLs provides an opportunity to determine their structure, metabolic pathway, and function in relation to human health and disease.

L76 ANSWER 60 OF 64 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 94221837 EMBASE
DOCUMENT NUMBER: 1994221837
TITLE: Improved thin-layer chromatographic **separation** of **gangliosides** by automated multiple development.
AUTHOR: Muthing J.
CORPORATE SOURCE: Institut fur Zellkulturtechnik, Universitat Bielefeld, Universitatsstrasse 25,33501 Bielefeld, Germany
SOURCE: Journal of Chromatography B: Biomedical Applications, (1994) Vol. 657, No. 1, pp. 75-81.
ISSN: 0378-4347 CODEN: JCBBEP
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 940811
Last Updated on STN: 940811
ED Entered STN: 940811
Last Updated on STN: 940811
AB Automated multiple development chromatography has been utilized to enhance **separation** of **gangliosides** on silica-gel precoated high-performance TLC plates. Three-fold chromatography of a complex

mixture of neolacto-series monosialogangliosides in the solvent chloroform-methanol-water (120:85:14, v/v, 2 mM CaCl2) resulted in a ca, three-fold increase in separation distance of e.g. α2-3 and α2-6 sialylated ganglioside isomers compared to conventional single chromatography in the standard solvent chloroform- methanol-water (120:85:20, v/v, 2 mM CaCl2). An extremely heterogenous murine disialoganglioside mixture was developed three times in chloroform-methanol-water (120:85:16, v/v, 2 mM CaCl2) leading to a more than two-fold increase in separation distance. Chloroform-methanol-water (120:85:22, v/v, 2 mM CaCl2) was the solvent of choice for multiple chromatography of ganglio- series polysialogangliosides from embryonic chicken brain.

L76 ANSWER 61 OF 64 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 1998-144736 [13] WPIX
DOC. NO. CPI: C1998-047256
TITLE: **Separating** liposomes or **lipid** complexes from fluid - by passing fluid through composite filter comprising ceramic substrate and ceramic **membrane** having specified average **pore** size.
DERWENT CLASS: B05 B07 J01 L02
INVENTOR(S): DURNING, A G; KELEMEN, R J
PATENT ASSIGNEE(S): (LIPO) LIPOSOME CO INC
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5716526	A	19980210	(199813)*		26

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
US 5716526	A	Cont of	US 1994-182213	19940114
		Cont of	US 1995-442073	19950516
			US 1996-599869	19960212

PRIORITY APPLN. INFO: US 1994-182213 19940114; US 1995-442073 19950516; US 1996-599869 19960212
AB US 5716526 A UPAB: 19980330

Separation of liposomes or **lipid** complexes from a fluid comprises passing the fluid through a composite filter consisting of a ceramic substrate and a ceramic **membrane**. The **membrane** has an average pore size of 0.1-0.2 mu m, the **membrane** average pore size being less than the sustrate average pore size. There is a transmembrane pressure of 5-35 psi. The liposomes or lipid complexes comprise a bioactive agent.

USE - The method can be used with liposomes that have an associated bioactive agent e.g. a hydrophilic drug, such as an aminoglycoside including gentamicin, streptomycin, tobramycin and neomycin B. The lipid complexes have associated hydrophobic bioactive agents such as polyene macrolide antibiotics e.g. nystatin, pimaricin, candicidin, filipin and

amphotericin B.

ADVANTAGE - The process provides efficient **separation** of the liposomes and **lipid** complexes using a filter that allows filtration at superior flux rates, requires less frequent replacement and is able to effectively separate materials such as unassociated bioactive agents from liposomes and lipid complexes. The ceramic filters are biologically inert and resistant to attack by microorganisms. They have higher temperature stability and can be more readily cleaned, sterilised and reused. They also have a wider chemical compatibility, are more resistant to **solvents**, are mechanically stronger , resist physical compression and have a longer useful life.
Dwg.3B,3D/8

L76 ANSWER 62 OF 64 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 1992-042765 [06] WPIX
DOC. NO. CPI: C1992-018760
TITLE: **Isolation** of mono sialo **ganglioside** from **lipid** mixts. - by **ultrafiltration** of complex with alpha-cyclodextrin.
DERWENT CLASS: B03 B04
INVENTOR(S): CASU, B; CEDRO, A; LANZAROTTI, E; NAGGI, A; TORRI, G; CASU, A
PATENT ASSIGNEE(S): (CRIN) CRINOS IND FARMACOBIOLOGICA SPA
COUNTRY COUNT: 18
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 469352	A	19920205	(199206)*		
R: AT BE CH DE ES FR GB GR IT LI LU NL SE					
US 5108613	A	19920428	(199220)		9
PT 98270	A	19920529	(199227)		
JP 04230398	A	19920819	(199240)		
US 5152998	A	19921006	(199243)		9
EP 469352	B1	19931103	(199344)	EN	14
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE					
DE 69100588	E	19931209	(199350)		
IT 1243340	B	19940610	(199441)		
ES 2060257	T3	19941116	(199501)		

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
EP 469352	A		EP 1991-111469	19910710
US 5108613	A		US 1991-729728	19910715
PT 98270	A		PT 1991-98270	19910710
JP 04230398	A		JP 1991-174194	19910715
US 5152998	A	Div ex	US 1991-729728	19910715
			US 1992-834454	19920212
EP 469352	B1		EP 1991-111469	19910710
DE 69100588	E		DE 1991-600588	19910710
			EP 1991-111469	19910710
IT 1243340	B		IT 1990-20942	19900713
ES 2060257	T3		EP 1991-111469	19910710

FILING DETAILS:

PATENT NO	KIND	PATENT NO

US 5152998	A	Div ex	US 5108613
DE 69100588	E	Based on	EP 469352
ES 2060257	T3	Based on	EP 469352

PRIORITY APPLN. INFO: IT 1990-20942 19900713

AB EP 469352 A UPAB: 19940120

New complexes of monosialoganglioside (GM1) with alpha-cyclodextrin (ACD) have an ACD:GM1 molar ratio of 4-6:1. **Isolation** of GM1 from **lipid** mixts. comprises (a) ultrafiltering an aqueous solution containing the lipid mixture and ACD using a dialysis **membrane** with a cut-offf of at least 50 kD; (b) concentrating the permeate by ultrafiltration on a dialysis **membrane** with a cut-offf of 1kD; (c) isolating a GM1-ACD complex from the retentate; and (d) isolating GM1 from the complex.

USE/ADVANTAGE - GM1 is of interest in therapeutic applications (no details given). The process is simpler and more economic than known processes based on ion-exchange chromatography (cf. Biochim. Biophys. Acta, 528, 257, 1978).

In an example, a solution of 880 mg lipid extract (57% GM1) in 80 ml H20 was mixed with 20 ml of a 10% aqueous ACD solution The mixture (50 ml) was ultrafiltered on an 'Amicon' YM-100 (RTM) **membrane** with addition of 2% aqueous AMD to give 250 ml of permeate. This was to 20 ml on an 'Amicon' YM-1 (RTM) **membrane**. The retentate was freeze dried and the prod. was extracted with 5 x 10 ml CHCl3/MeOH (2:1). The extract was evaporated in vacuo to give 138 mg (55%) of GM1 with a purity of 97% by sialic acid assay. @(12pp Dwg.No.0/2 0/2

L76 ANSWER 63 OF 64 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1991-178043 [24] WPIX

DOC. NO. CPI: C1991-076853

TITLE: **Purificn.** of **ganglioside** mixture - using **solvent** extraction and **PPTN** processes, to obtain mixture for use in repair of peripheral and central nervous systems.

DERWENT CLASS: B04

INVENTOR(S): CALLEGARO, L; DELLA, VALLE F; LORENZI, S; DELLA-VALLE, F; DELLAVALLE, F

PATENT ASSIGNEE(S): (FIDI-N) FIDIA SPA

COUNTRY COUNT: 28

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9107417	A	19910530	(199124)*		
RW: AT BE CH DE DK ES FR GB GR IT LU NL SE					
W: AU CA FI HU JP KR NO US					
ZA 9009123	A	19910731	(199136)		
AU 9067275	A	19910613	(199137)		
PT 95917	A	19910913	(199140)		
FI 9103454	A	19910717	(199141)		
EP 454818	A	19911106	(199145)		
R: AT BE CH DE ES FR GB GR IT LI					
NO 9102780	A	19910716	(199146)		
CN 1053067	A	19910717	(199217)		
HU 58754	T	19920330	(199217)		
JP 04503076	W	19920604	(199229)		19
NZ 236059	A	19930326	(199316)		

IT 1236594	B	19930318	(199339)		
AU 649635	B	19940602	(199427)		
NO 175311	B	19940620	(199428)		
IT 1243295	B	19940526	(199441)		
HU 210145	B	19950228	(199514)		
US 5521164	A	19960528	(199627)	19	
FI 97138	B	19960715	(199638)		
IL 96346	A	19970610	(199730)		
EP 454818	B1	19980819	(199837)	EN	
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE					
DE 69032578	E	19980924	(199844)		
ES 2119747	T3	19981016	(199849)		
CA 2045142	C	20000718	(200045)	EN	
JP 3140458	B2	20010305	(200115)	18	
IE 82530	B	20021002	(200275)		

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
ZA 9009123	A		ZA 1990-9123	19901114
EP 454818	A		EP 1990-916737	19901116
JP 04503076	W		JP 1990-515353	19901116
			WO 1990-EP1960	19901116
NZ 236059	A		NZ 1990-236059	19901113
IT 1236594	B		IT 1989-41747	19891117
AU 649635	B		AU 1990-67275	19901116
NO 175311	B		WO 1990-EP1960	19901116
			NO 1991-2780	19910716
IT 1243295	B		IT 1990-41716	19901018
HU 210145	B		WO 1990-EP1960	19901116
			HU 1991-2391	19901116
US 5521164	A	Cont of	US 1991-721498	19910911
			US 1993-116268	19930903
FI 97138	B		WO 1990-EP1960	19901116
			FI 1991-3454	19910717
IL 96346	A		IL 1990-96346	19901114
EP 454818	B1		EP 1990-916737	19901116
			WO 1990-EP1960	19901116
DE 69032578	E		DE 1990-632578	19901116
			EP 1990-916737	19901116
			WO 1990-EP1960	19901116
ES 2119747	T3		EP 1990-916737	19901116
CA 2045142	C		CA 1990-2045142	19901116
			WO 1990-EP1960	19901116
JP 3140458	B2		JP 1990-515353	19901116
			WO 1990-EP1960	19901116
IE 82530	B		IE 1990-4135	19901116

FILING DETAILS:

PATENT NO	KIND		PATENT NO
JP 04503076	W	Based on	WO 9107417
AU 649635	B	Previous Publ.	AU 9067275
		Based on	WO 9107417
NO 175311	B	Previous Publ.	NO 9102780
HU 210145	B	Previous Publ.	HU 58754
		Based on	WO 9107417

FI 97138	B	Previous Publ.	FI 9103454
EP 454818	B1	Based on	WO 9107417
DE 69032578	E	Based on	EP 454818
		Based on	WO 9107417
ES 2119747	T3	Based on	EP 454818
CA 2045142	C	Based on	WO 9107417
JP 3140458	B2	Previous Publ.	JP 04503076
		Based on	WO 9107417

PRIORITY APPLN. INFO: IT 1989-41747 19891117; IT 1990-41716 19901018

AB WO 9107417 A UPAB: 19930928

Preparation of a mixture of gangliosides comprises (a) subjecting ganglioside-containing tissue to lipid elimination with acetone to produce an acetone ppte., (b) suspending the acetone ppte. in a first **solvent** mixture (e.g. CH2Cl2, MeOH an NaOH) capable of partitioning hydrophobic substances from hydrophilic substances, (c) filtering the partitioning mixture to obtain a first liquid phase, (d) subjecting the first liquid phase to precipitation (e.g. by adding CaCl2 and acetone) to obtain a first raw material, (e) solubilising the first raw material (using e.g. a mixture of water, CHCl3 and MeOH) and subjecting the solubilised first raw material to heating at a pH of about 12, (f) subjecting the heated solubilised first raw material to a second partitioning in a second **solvent** mixture (e.g. water, CHCl3 and n-butanol) capable of partitioning hydrophobic substances from hydrophilic substances, (g) separating the second partitioning mixture to remove an organic phase and retain an aqs. phase, (h) subjecting the aqs. phase to precipitation (e.g. by adding acetone and NaCl) to produce a second raw material, (j) solubilising the third raw material in a base, e.g. 1N NaOH, (k) neutralising the solubilised third raw material and (l) subjecting the neutralised solubilised third raw material to dialysis through a **membrane** with a mol. weight cut off of about 10 kD to produce a ganglioside mixture. Also claimed is a ganglioside mixture prepared by the method.

USE/ADVANTAGE - The process eliminates infectious contaminants associated with slow viruses such as bovine spongiform encephalopathy while allowing the biological and pharmacological activity of the mixture to remain unaltered.

L76 ANSWER 64 OF 64 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 1968-88276P [00] WPIX
TITLE: Separation of substances by **osmosis** through a **membrane.**
DERWENT CLASS: A00
PATENT ASSIGNEE(S): (LIFI) SOC CIV DES PRODUITS LIFINE
COUNTRY COUNT: 3
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
GB 1077535	A		(196800)*		
CA 803296	A		(196801)		
DE 1717173	B		(197302)		

PRIORITY APPLN. INFO: FR 1963-3071 19630718

AB GB 1077535 A UPAB: 19930831

Separation of gas, **lipid**, alcohol or hydrocarbon from

a medium is
effected by **osmosis** through a **membrane** which is
impermeable to
the medium but permeable to the substance, the **membrane** being of
a material impermeable to the substance and having incorporated
2-25 weight% of an additive permeable to the substance but not soluble
in, in the form of discrete particles, and which pref. swells or
gels in the presence of the substance; a wetting agent for the
additive is pref. also present.

The **membrane** is used partic. in medicine and surgery, in
the chemical and pharmaceutical industries and for wrapping
materials.

=> file home
FILE 'HOME' ENTERED AT 15:49:20 ON 12 JUL 2005

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=> d his

     (FILE 'HOME' ENTERED AT 13:33:29 ON 12 JUL 2005)

     FILE 'CAPLUS' ENTERED AT 13:33:37 ON 12 JUL 2005
                E US2004-825210/AP
L1            1 S E3

     FILE 'ZCAPLUS' ENTERED AT 13:34:29 ON 12 JUL 2005

     FILE 'ZREGISTRY' ENTERED AT 13:42:29 ON 12 JUL 2005

     FILE 'ZCAPLUS' ENTERED AT 13:47:04 ON 12 JUL 2005
                E GLYCOLIPIDS+ALL/CT
                E SEPARATION+ALL/CT
                E OSMOTIC PRESSURE+NT/CT
                E OSMOSIS/CT
                E E3+ALL
                E POLAR SOLVENTS+NT/CT
                E SOLVENTS+NT/CT
                E PLANT CELL+NT/CT
                E PLANT TISSUE+NT/CT
                E ANIMAL CELL+NT/CT
                E ANIMAL TISSUE+NT/CT

     FILE 'HCAPLUS' ENTERED AT 13:53:59 ON 12 JUL 2005
L2          8904 S GLYCOLIPIDS+PFT/CT
L3         16736 S SEPARATION+PFT/CT
L4         11100 S OSMOTIC PRESSURE+NT/CT
L5          5968 S OSMOSIS+PFT/CT
L6          7853 S PLANT CELL/CT
L7         17799 S PLANT TISSUE/CT
L8         40698 S ANIMAL CELL/CT
L9         35966 S ANIMAL TISSUE/CT
L10          917 S SOLVENTS/CT (L) NONPOLAR
L11         1300 S POLAR SOLVENTS+NT/CT
L12            1 S L2 AND L3 AND L4-L5 AND L6-L9 AND L10-L11
L13            2 S L2 AND L3 AND L6-L9
L14            1 S L2 AND L3 AND L10-L11
L15       397013 S GLYCOLIPIDS OR GANGLIOSIDE? OR GLYCOSPHINGOLIPID? OR PHOSPHOL
L16      1342220 S SEPARAT?
L17         6423 S L15 (5A) L16
L18            5 S L17 AND L10-L11
L19            4 S L18 NOT SPIRULINA/TI
L20          109 S L17 AND L6-L9
L21        71071 S MEMBRANES/CW
L22            1 S L2 AND L3 AND L21 AND L4-L5
L23          162 S L17 AND L21
L24            5 S L17 AND L4-L5
L25        53069 S SOLVENTS/CW
L26           31 S L17 AND L25
L27        72993 S OSMOS? OR OSMOT?
L28            1 S L26 AND L27
L29           27 S L26 NOT (L19 OR L24)
L30           12 S L29 AND (EXTRACTION OR SOLVENT OR ISOLAT? OR PREDICTED)/TI
L31           11 S L30 NOT GASES/TI

     FILE 'BIOSIS' ENTERED AT 14:22:26 ON 12 JUL 2005
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L32      101597 S GLYCOLIPIDS OR LIPIDS OR GANGLIOSIDES OR GLYCOSPHINGOLIPIDS
L33      377403 S SEPARAT?
L34       42957 S OSMOS? OR OSMOT?
L35       65115 S SOLVENT
L36       31451 S (PLANT OR ANIMAL) (W) (CELL OR TISSUE)
L37     1334773 S EXTRACT? OR ISOLAT? OR PURIF?
L38        6258 S L32 (5A) (L33 OR L37)
L39     1126893 S MEMBRAN?
L40          32 S L32 (5A) (L33 OR L37) AND L34
L41          24 S L32 (5A) (L33 OR L37) AND L34 AND L39
L42           1 S L41 AND POLAR/TI
L43         544 S L32 (5A) (L33 OR L37) AND L35
L44          11 S L32 (5A) (L33 OR L37) AND L35 AND L36

     FILE 'MEDLINE' ENTERED AT 14:32:37 ON 12 JUL 2005
L45       31536 S GLYCOLIPIDS+NT/CT
L46       28685 S CELL SEPARATION+NT/CT
L47        7004 S OSMOTIC PRESSURE/CT
L48       21234 S SOLVENTS/CT
L49           0 S L45 AND L46 AND L47 AND L48
L50           0 S L45 AND L46 AND (L47 OR L48)
L51       25372 S GLYCOLIP? OR GANGLIOS? OR GLYCOSPHINGO?
L52     1408491 S SEPARAT? OR ISOLAT? OR PURIF? OR SEPN
L53        1607 S L51 (5A) L52
L54          20 S L53 AND (L47 OR L48)

     FILE 'EMBASE' ENTERED AT 14:45:32 ON 12 JUL 2005
                E GLYCOLIPID/CT
                E E3+ALL
                E CELL SEPARATION/CT
                E E3+ALL
                E OSMOTIC PRESSURE/CT
                E E3+ALL
                E SOLVENTS/CT
                E E3+ALL
L55       18932 S GLYCOLIPID+NT/CT
L56        3761 S CELL SEPARATION+NT/CT
L57        2110 S OSMOTIC PRESSURE/CT
L58       14480 S SOLVENT/CT
L59           0 S L55 AND L56 AND (L57-L58)
L60       19421 S GLYCOLIP? OR GANGLIOS? OR GLYCOSPHINGO?
L61     1029779 S SEPARAT? OR ISOLAT? OR PURIF? OR SEPN
L62        1387 S L60 (5A) L61
L63          10 S L62 AND (L57-L58)

     FILE 'WPIX' ENTERED AT 15:29:04 ON 12 JUL 2005
L64       22955 S GLYCOLIP? OR GANGLIOS? OR GLYCOSPHINGO? OR LIPID
L65     1286670 S  SEPARAT? OR ISOLAT? OR PURIF? OR SEPN
L66       12576 S OSMOT? OR OSMOS?
L67      372527 S SOLVENT
L68      140665 S MEMBRANE
L69         916 S L64 (5A) L65
L70         298 S L64 (5A) L65 AND L66-L67
L71          31 S L64 (5A) L65 AND L66-L67 AND L68
L72           6 S L71 AND (PORE OR PPTN OR EASY OR ULTRAFIL? OR OSMOSIS)/TI
L73           5 S L72 NOT HYBRIDOMA?/TI

     FILE 'HCAPLUS' ENTERED AT 15:43:42 ON 12 JUL 2005
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FILE 'HCAPLUS' ENTERED AT 15:45:06 ON 12 JUL 2005
L74 20 S L12 OR L13 OR L14 OR L19 OR L24 OR L31

FILE 'BIOSIS' ENTERED AT 15:45:55 ON 12 JUL 2005
L75 12 S L42 OR L44

FILE 'MEDLINE' ENTERED AT 15:46:35 ON 12 JUL 2005

FILE 'EMBASE' ENTERED AT 15:47:12 ON 12 JUL 2005

FILE 'WPIX' ENTERED AT 15:47:21 ON 12 JUL 2005

FILE 'MEDLINE, HCAPLUS, BIOSIS, EMBASE, WPIX' ENTERED AT 15:48:06 ON 12 JUL 2005
L76 64 DUP REM L54 L74 L75 L63 L73 (3 DUPLICATES REMOVED)

FILE 'HOME' ENTERED AT 15:49:20 ON 12 JUL 2005

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